



**AIRFIX**

magazine for plastic modellers

**Inside:** More American Civil War figure conversions, the Canadian Ram tank and Dassault-Breguet aircraft



star  
**F111E**  
feature



**Advent Express — special NATO exercise report**



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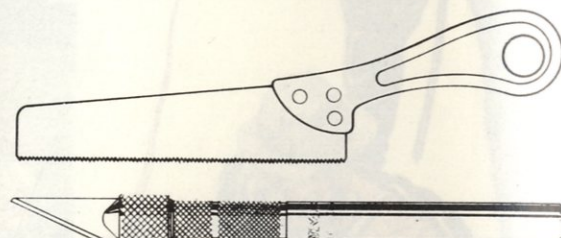
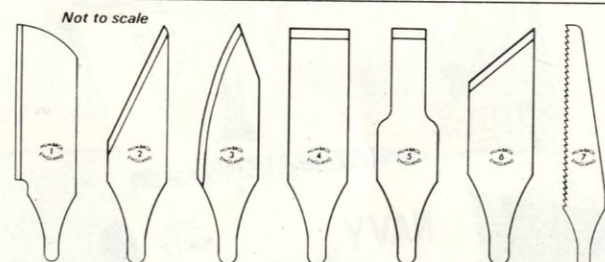
Deeply ground blade to give finer cutting edge

High tensile carbon steel blade

Taper-fit bush for ease of blade replacement

Unique locking action

Tang of blade locates securely in blade holder



# HUMBROL

MARFLEET · HULL · HU9 5NE



March 1976

Volume 17 No 7

## magazine for plastic modellers

Editorial Director **Darryl Reach** Editor **Bruce Quarrie** Art Editor **Tim McPhee**  
Editorial offices Bar Hill, Cambridge CB3 8EL. Telephone Crafts Hill 80010

## On the cover

**Left** These two drawings by Gerry Embleton, reproduced here by kind permission of Ian Allan Ltd, depict (top) a Lieutenant of Virginia cavalry, Confederate Army, in 1863, proudly displaying an old tin can which he has apparently been using for target practice; and a Confederate infantryman of 1864-5 examining the wear on his boots. American Civil War infantry and cavalry figure models are described in Martin Windrow and Gerry Embleton's article this month. **Top right** An artist's impression of the 'Sea Harrier' showing the probable colour scheme for anyone modelling this aircraft from Richard Gardner's article in our October 1975 issue. **Centre** A-7E Corsair II of VA-86 on board the USS Nimitz during her recent visit to Britain, as described in our December 1975 issue (Peter F. Guiver). **Bottom** Chieftain tank fitted with a dozer blade to assist digging-in seen travelling at speed at RAC Bovington (MoD).

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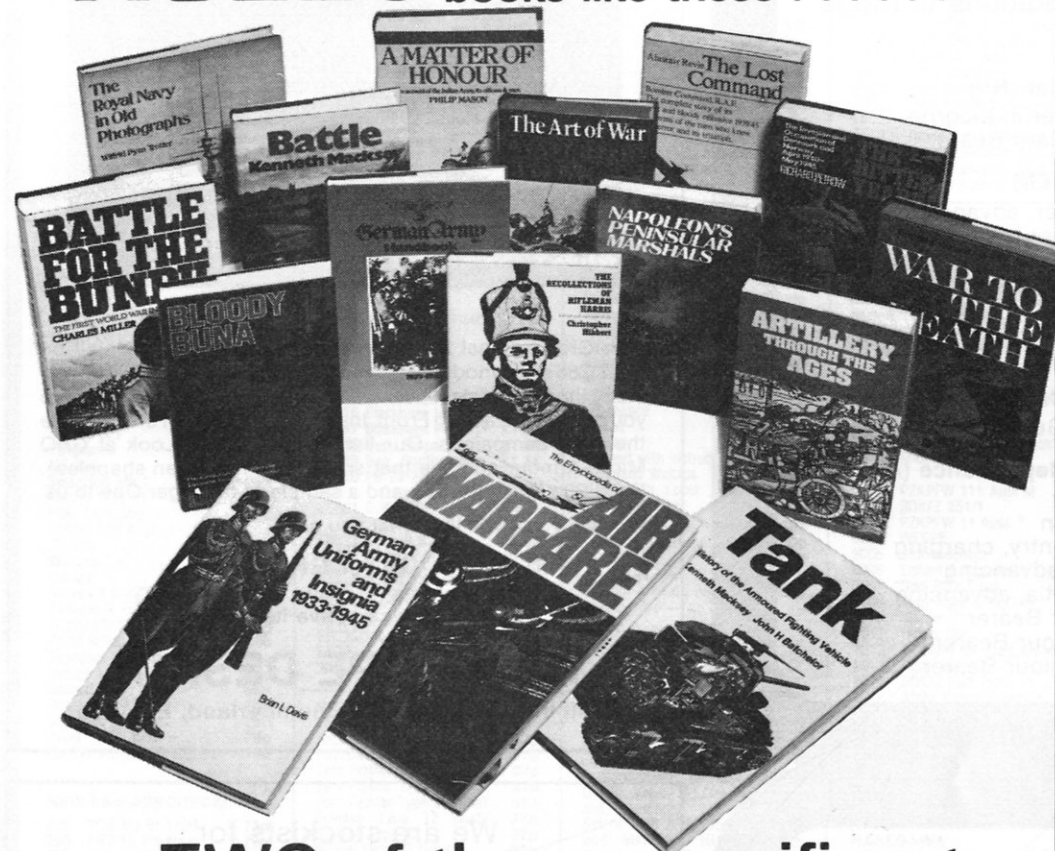
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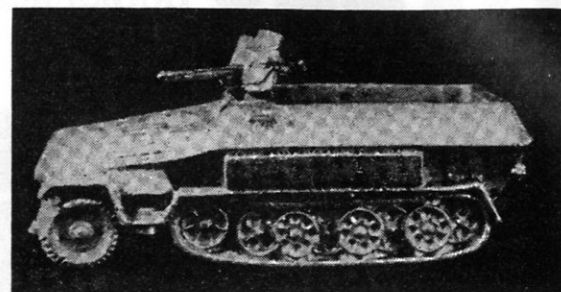
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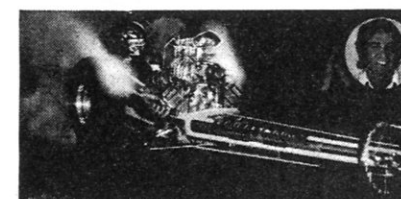
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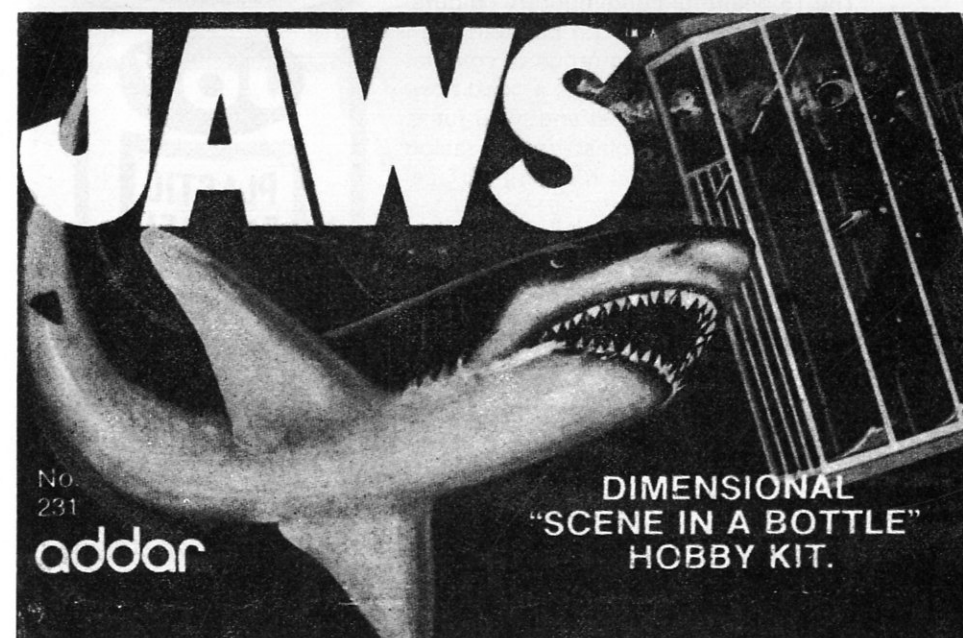
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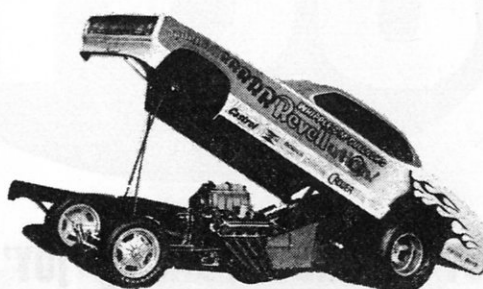
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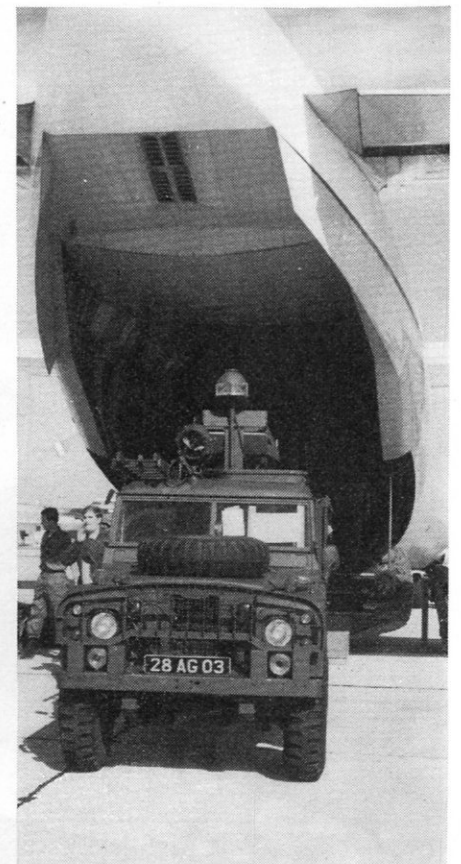
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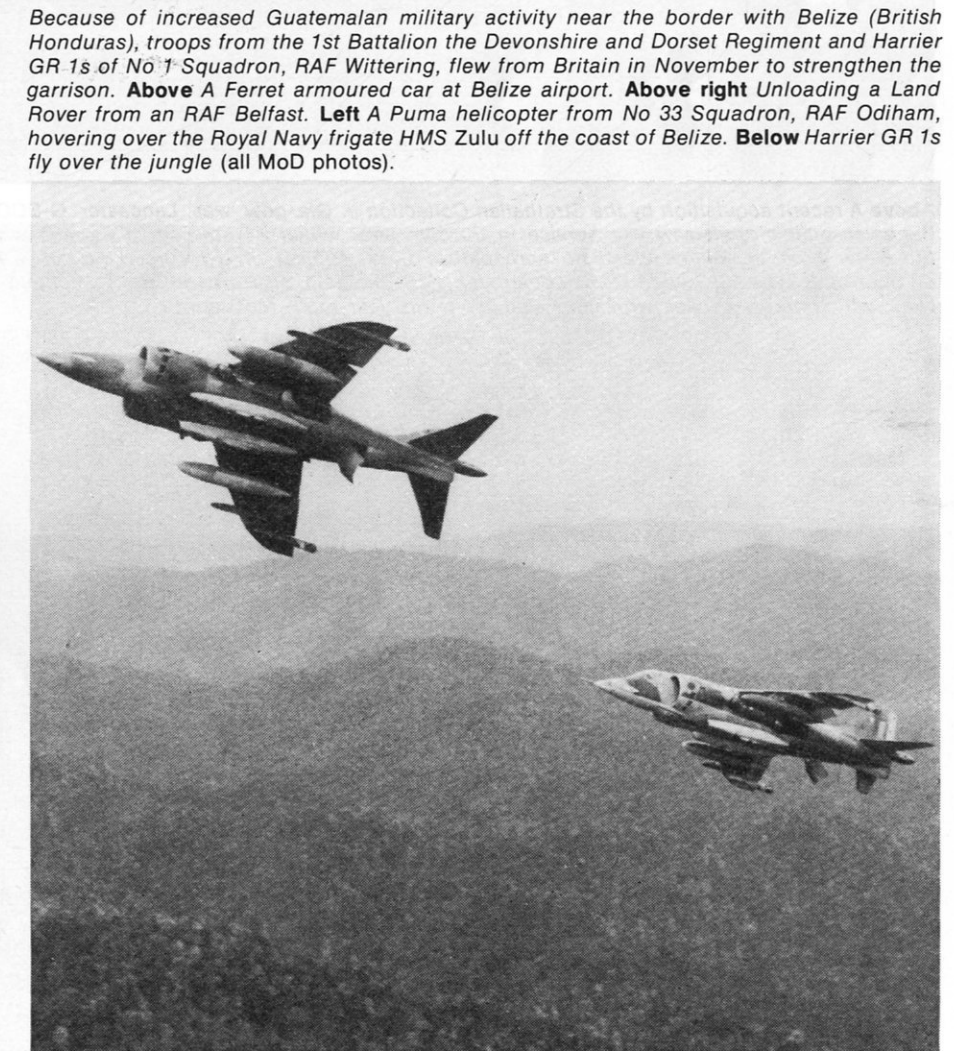
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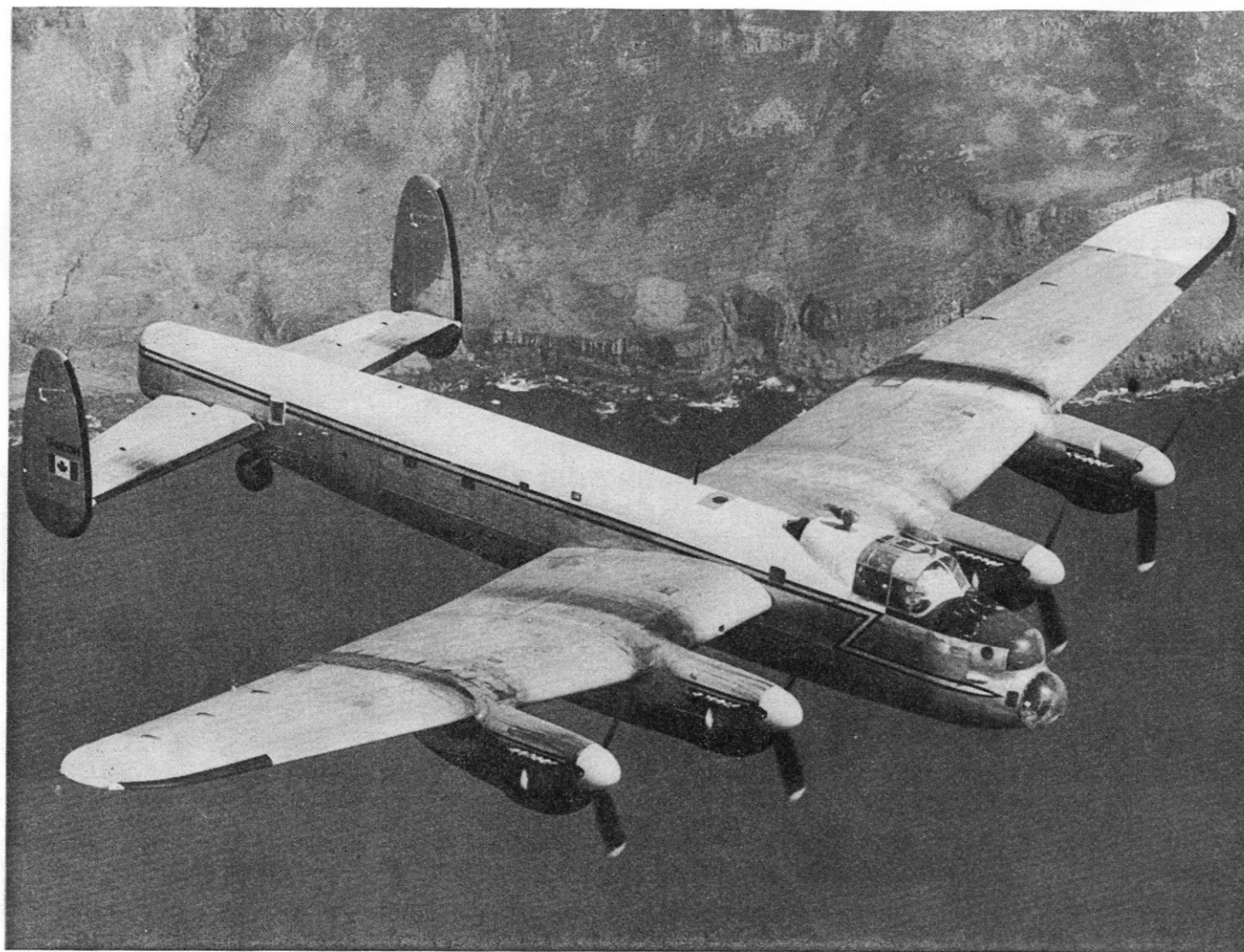
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Because of increased Guatemalan military activity near the border with Belize (British Honduras), troops from the 1st Battalion the Devonshire and Dorset Regiment and Harrier GR 1s of No 1 Squadron, RAF Wittering, flew from Britain in November to strengthen the garrison. **Above** A Ferret armoured car at Belize airport. **Above right** Unloading a Land Rover from an RAF Belfast. **Left** A Puma helicopter from No 33 Squadron, RAF Odiham, hovering over the Royal Navy frigate HMS Zulu off the coast of Belize. **Below** Harrier GR 1s fly over the jungle (all MoD photos).







**Above** A recent acquisition by the Strathallan Collection in Glasgow was Lancaster G-BCOH, seen here en route from Canada. The Canadian-built aircraft saw war service in Europe, after which it returned to Canada where it was used for some time as a forest fire water bomber. **Below** Westland/Aerospatiale Lynx, subject of a forthcoming Airfix kit, seen during recent deck landing trials on board the Type 42 Guided Missile destroyer HMS Sheffield, off Portland. HMS Sheffield will be one of the first ships to operate the Lynx, which enters service with the Royal Navy this year (both MoD photos).



## AIRFIX NEW MODELS FILE

## ROMMEL'S HALF-TRACK

In the Western Desert battles of 1941-43 the Germans came near to victory due to the tactical skill of their commander, Field Marshall Erwin Rommel. Rommel frequently directed operations from just behind the front line, his armoured radio command car becoming a familiar sight to the German troops.

'Greif' (Strike), as he named the vehicle, was a standard SdKfz. 250/3 semi-tracked reconnaissance car.

The SdKfz.250 series of armoured vehicles was designed and built by the firm of Demag. The 250's carried a crew of six and a main armament of two heavy machine guns. With the 250/3 version, accommodation was reduced to four to make room for the radio equipment.

No less than 14 different models of the basic 250 were produced including supply and cable laying vehicles, anti-tank and self-propelled guns and observation cars. The engine had seven forward and three reverse gears giving it a respectable

cross-country speed of 37 mph.

The Airfix 'Greif' reproduces a multitude of accessories and fine detail flexible tracks.

For up-to-date news and details of Airfix models get the Airfix magazine, price 25p.

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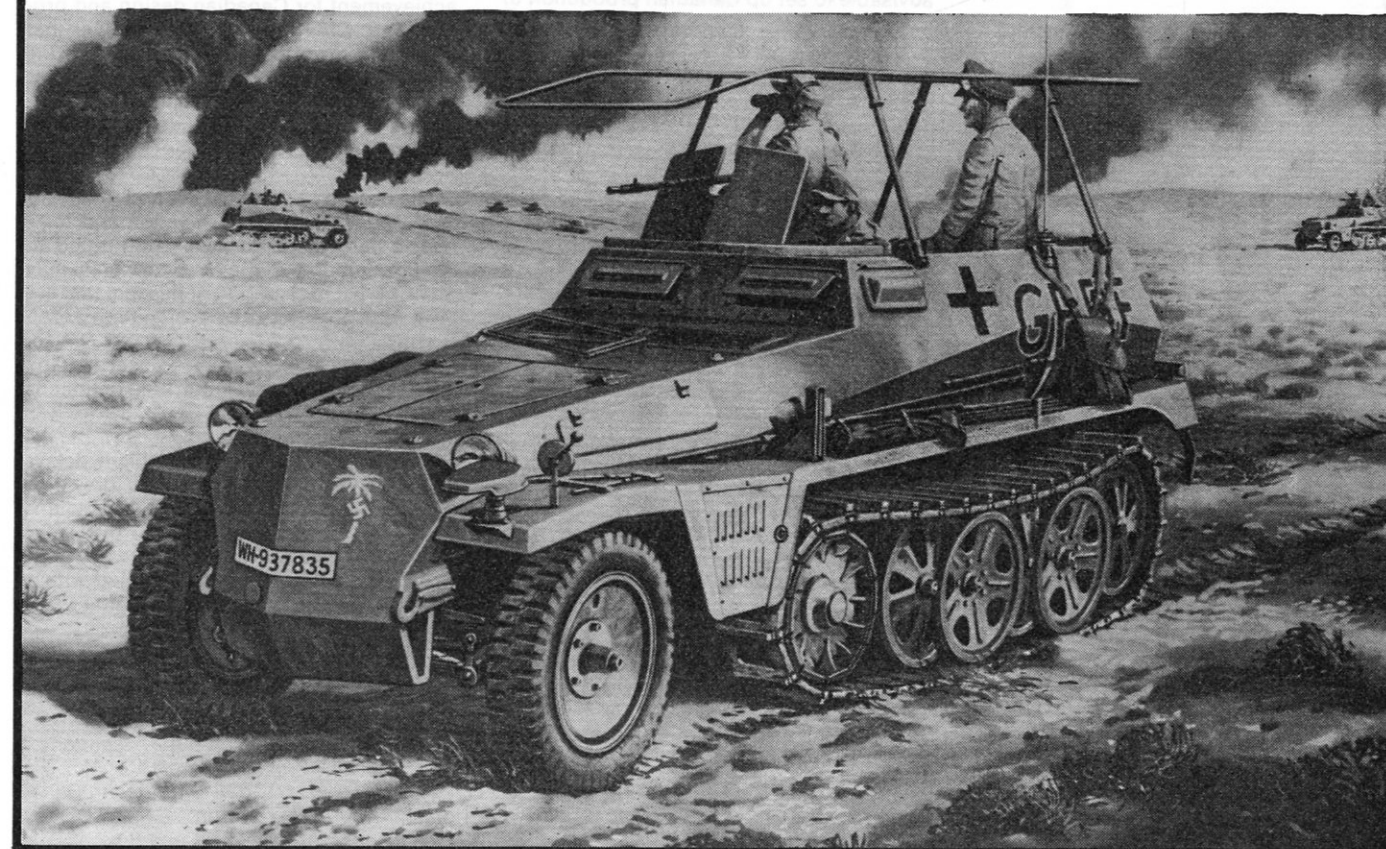


**Rommel's Half-Track  
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### Technical Details

Date of origin:	1939
Make/Model:	Demag SdKfz 250/3
Engine:	6 cylinder 4.17 lit. Maybach.
Top Speed:	37 mph (cross-country)
Fuel capacity:	31 gallons.
Range:	186 miles.
Armament:	Two heavy machine guns.

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Part one of three on this much neglected World War 2 vehicle by **Joe Sauve**

THE BELIEF PRIOR to the Second World War was that Canadian industry did not lend itself to tank production. It was not expected that, in the event of war, Canada would need to build tanks. The theory at the time was that Canadian tank battalions would be issued with British-produced tanks. Dunkirk and the bombing of British factories changed the situation dramatically.

Britain could not build enough tanks for her own forces, much less supply Canada as well. As a British order for Valentine Infantry tanks had been placed with the Canadian Pacific Railway Company of Montreal in the spring of 1940, Canada followed with an order to supply the Canadian Tank Brigade from the same source.

After the fall of France it was thought advisable to set up Canadian production of

both light armoured vehicles and tanks. By the summer of 1940, with the authorization for a second Canadian armoured division, there was a requirement for 1,000 Cruiser tanks.

Since the United States could not supply these, the decision was made to establish a tank arsenal administered by Montreal Locomotive Works and to build a Canadian Cruiser Tank based on the American M3 Lee/Grant design.

But, by the fall of 1940, it was obvious that the M3 had some unsatisfactory features from a British and Canadian point of view. The high silhouette, inadequate armour, wireless positioning and location of the main armament (in a sponson) were considered to be features which could be corrected by redesigning the M3.

The production of the Ram was a great achievement for Canadian design and production capability when you consider that the running prototype was ready by June 1941. The Canadian Ram Cruiser tank was born with a little help from our friends, since the prototype was built at the parent company of MLW, the American Locomotive Works.

The prototype was then loaned to the US War Department for observation and tests and is considered to have contributed to the development of the M4 Sherman. It may be as partial recognition of this fact that the Ram was given the US designation M4A5 Ram.

Canadian industry had to learn many new techniques from both the Americans and the British. The job was nevertheless successfully completed.

To add to the production problem, delays in supplying British gun mount drawings for the 6 pdr resulted in the Canadians designing a new mount. Due to this delay early Ram tanks were equipped with 2 pdr guns. Since the Ram was designed with a removable faceplate over the mantlet this kind of change was easily effected.

Continued on page 390

**Top of page** Ram IId CT-40897 'Lancer' of the GGFG Regiment, England, May 25 1943. **Left** Ram I CT-39813 of the 5th Canadian Armoured Division, England, May 1942 (Public Archives of Canada).



## AIRFIX NEW MODELS FILE

## NEW SERIES 1/32 SCALE TANKS

Undoubtedly one of the more easily recognised tanks of the Second World War, the Crusader III appeared in the summer of 1942. It was regarded as a respected opponent by the German tank crews and enjoyed considerable success in the skirmishing and hit and run roles.

Design of the 'heavy cruiser' Crusader series was started in 1938 by the War Office's Mechanisation Board in conjunction with Nuffield Mechanisation and Aero Limited.

Crusaders provided the hard-pressed Eighth army with a tank capable of matching the Africa Korps' Panzer III's and early MKIV's in firepower, if not in armour protection, during the crucial battle of El Alamein in October 1942.

Meanwhile, at the other end of North Africa, the 6th Armoured Division, equipped with Crusader III's, landed in Tunisia as part of the Allied First Army in Operation Torch.

In tank versus tank battles the hull-down position was much favoured and often easy to use due to the Crusader's low profile in the undulating terrain

common to many areas of North Africa.

A wide choice of markings is provided with this new Airfix Crusader III including Regimental insignia and tank squadron transfers for the North African Campaigns.

For up to date news and details of Airfix models, get the Airfix magazine.

Also available are a set of detailed Airfix books. These give background information to such models as the HMS Victory, Cutty Sark, Mayflower, Spitfire, Messerschmitt Bf109, P-51 Mustang and Hawker Hurricane.



**Crusader III Tank**  
**1/32 Scale. Series 8.**  
**New to the world's biggest range**  
**of construction kits.**

### Technical Details

Date of origin: 1942

Engine: 340 h.p. Nuffield Liberty engine

Top Speed: 27 m.p.h.

Range: 100 miles

Weight: 19.75 tons

Height: 7ft. 4ins.

Overall length (including fuel tank): 20ft. 8ins.

Basic Hull Width: 8ft. 8ins.

Armaments 6 pdr gun  
Besa machine gun.

## THE GUIDING LIGHT OF OPERATION TORCH.







Continued from page 388

The 2 pdr Ram became the RAM I and the 6 pdr Ram became the RAM II. The Ram underwent a continuous process of changes and improvements during its production. It kept up to the M3/M4 chassis changes as well as incorporating various other user requested modifications.

The Ram was a Medium or Cruiser Tank with a 25 mph speed, 2-3 inch frontal armour, a turret mounted QF 6 pdr Mk III or V gun (Ram I QF 2 pdr Mk IX or X), and a five man crew. It could climb a 35° slope, cross a 7 foot 5 inch trench or climb a two foot wall. It had a .30 Cal Browning MG M1919A4 coaxial in the turret, one in the co-driver's cupola and one on the turret top for AA use. Both the hull and turret were armour steel castings.

The Ram I tank can best be identified by its 2 pdr gun, flat face-plate and pistol ports in both sponson doors. The Ram II went through a series of modifications in addition to the replacement of the 2 pdr gun by the 6 pdr. Table 1 summarizes the major changes by vehicle serial number. For convenience and cross-reference I have used the additional designations 'a' to 'e' for the Ram II. Although this additional designation appears in some records, it was not official. Specific serial numbers for the various conversions will be noted in Part 2. Many additional modifications occurred within the major groups and must be explained.

During the Ram IIa series a 3/4 inch square bar for splash protection was welded to the hull casting around the periphery of the sponson door starting at vehicle CT-39881 until the doors were eliminated. From the Ram IIe series onward splash beading was added around the cupola and in front of the driver's door. Also installed in this series was the 9 x 9 inch hatch under the cupola gunner's feet to allow use of the SNAKE minefield clearing device.

During the Ram II series, the gun removal hatch at the rear of the turret was eliminated. The resulting opening was cast solid. This occurred from vehicle CT-40538. When the auxiliary cupola was removed the



Two views of a Ram IIa or b at A33 Canadian Armoured Corps Training Establishment, Camp Borden, Ontario, July 7 1943 (Public Archives of Canada).

hull casting was changed to accommodate the co-driver.

Another notable change of interest to the modeller was the replacement of the left side turret periscope by a ventilator from the Ram IIa series onward. The horn (klaxon) was also eliminated at the same time (right front horn).

Table II gives the basic dimensions of the Ram Tank. The point of note here is that the maximum width allowed on British railways was 114 inches and the RAM IIa and RAM IIb exceeded this. Sponson doors were removed for rail shipment to reduce the total width to an acceptable size.

The variations in track and suspension will be covered in Part 3.

From these modest beginnings this vehicle became an ARV, AVRE, APC and gun tower.

Probably the first conversion of the Ram was to the Armoured Recovery Vehicle (ARV) role. Before anybody jumps up, the Command and Observation Post vehicle was a unique production and therefore not a true conversion. Ram Is generally were used for this conversion. A 3-inch howitzer close support version was suggested but never built. An engineer conversion, the RAM SBG was built and used in exercises. A total of 40 vehicles were converted to 75

mm Mk V gun and used as training vehicles. A 3.7 inch anti-aircraft mount was tried in prototype form but later abandoned.

The final group of conversions were the turretless Rams. Ram tanks were used in the ammo-carrying, gun-towing, flame-throwing and armoured personnel carrier roles. The Kangaroo carried personnel, the Wallaby carried ammo and the Badger spat fire. A rather interesting crew. Each of these will be covered in more depth in Part 2.

I am indebted to the Public Archives of Canada and Carl Vincent and Peter Robertson specifically for assistance in researching this series. All photos for this series are Public Archives of Canada or my personal collection. □

#### Dimensions of the Ram tank

Type	Length	Width	Height
RAM I	19'	9' 5"	8' 9"
RAM IIa	19'	9' 7"	8' 9"
RAM IIb	19'	9' 9"	8' 9"
RAM IIc	19'	9' 5"	8' 9"
RAM IId	19'	9' 2"	8' 9"
RAM IIe	19'	9' 2"	8' 9"

L & W are plus or minus 1" due to casting variations.

#### Major modifications to the Ram production

Type	Description	WD numbers
RAM I	Sponson doors with pistol ports, 2 pdr gun, 1 turret periscope on left side	CT-39781 to CT-39830
RAM IIa	Sponson doors with one ventilator LH and one pistol port RH door, 6 pdr gun.	CT-39831 to CT-39980
RAM IIb	Sponson doors with ventilators in each door, 6 pdr gun.	CT-39981 to CT-40100
RAM IIc	Less sponson doors but with ventilator castings, 6 pdr gun. Escape hatch in hull floor under cupola gunner's feet.	CT-40101 to CT-40437
RAM IId	Less sponson doors but with cast bulge on both sides, 6 pdr gun.	CT-40438—CT-40937 & CT-159402—CT-159501
RAM IIe	As Ram IId but with auxiliary cupola removed.	CT-159502 to CT-160193

# General Dynamics

## F111E

Modelling details for aircraft enthusiasts working from either the old or new Airfix kit by **Bryan Philpott**

FROM THE OUTSET the F-111 was designed as an aircraft with variable geometry (VG) wings whose angle of sweep could be varied by the pilot in flight. It was also the first US military aircraft to be designed for use by the US Air Force and Navy, and the prototype made its maiden flight on December 21 1964, several weeks ahead of the time originally envisaged for this. During the two years prior to this historic event over 25 million man-hours and 21,000 hours of wind tunnel testing had been expended on the aircraft's design, and despite much adverse comment and hostility from certain quarters, the development of such an advanced weapons system continued at a similar pace until today the United States has an aircraft that has more than vindicated the faith placed in it.

In 1961 the Secretary of Defense, Robert McNamara, issued a directive that the Air Force, Navy, Marine Corps and Army, should consider a single aircraft called the Tactical Fighter Experimental (TFX) concept, that could perform all tactical fighter requirements of the services, including air support, air superiority and long range interdiction. Later this was changed to two separate lines of development and gradually the Army and Marine Corps were eliminated from the arrangement. After much initial study, six basic designs were submitted and all rejected! The evaluation team did, however, see potential in the designs of Boeing and General Dynamics, both of whom received contracts to proceed further. In November 1962 it was announced that the final contract had been awarded to General Dynamics and the F111

proceeded with the F111A. This aircraft was the basic design on which all subsequent versions were based.

The British and Australian governments expressed interest in the aircraft as replacements for the ill-fated TSR2 and Mirage respectively, but the British eventually cancelled their options settling for the F4, and the Australian version became designated F111C.

The F111B was a version designed for the US Navy but it never managed to meet the operational requirements of that force and in 1968 work was stopped on it after only seven had been constructed. The F111A was used by the USAF and 159 of this version were built, the F111E was the second variant and had improved air intakes as well as other minor modifications to its airframe and avionics. The F111D was the third in the tactical series with 'E' intake geometry and different power units as well as a more advanced avionics system. The fourth and last in the tactical series was the F111F which is really the ultimate and how the design team envisaged that the original F111 design would be. This is basically an A or E airframe with more powerful TP 30-100 engines and avionics that were not as complex as the D but better than those used in the A or E. The FB111A was an interim replacement for the B52 in Strategic Air Command — who also used the F111A — and used a F111D fuselage with F111B wings, its landing gear was reinforced and it could carry 50 x 750 lb bombs.

The primary role of the aircraft is one of tactical strike in all weather, day or night

operations.

The variable sweep wings can be positioned in flight through their entire sweep of 16 to 72.5 degrees, with only minor trim changes. This feature enables the aircraft to operate from relatively short runways, fly at supersonic speeds at low altitude and reach 2½ times the speed of sound above 60,000 feet.

The first F111E was delivered to Tactical Air Command (TAC) at Nellis Air Force Base on October 16 1967, since when it has been delivered to various other units of the USAF.

The first F111E to be delivered to the 20th Tactical Fighter Wing arrived at Upper Heyford, Oxon, on September 12 1970, and the Wing's three squadrons, the 55th, 77th and 79th, are now fully equipped. The Wing is the only base in Europe flying the F111 and its role is to provide long range all-weather, strike and attack capability, in support of NATO.

There are many technical advancements in the aircraft but the four most significant are the variable sweep wing, the crew module, the fan jet-afterburner engine, and the single trunnion landing gear.

The crew module is an unusual feature and was designed by McDonnell Aircraft Corporation. It is self-supporting and allows the crew to eject at any time by activating an explosive device which releases the whole module from the airframe. A rocket motor propels the module clear of the aircraft and drogue, plus main parachutes, lower it to safety, where special shock-absorbing material and inflatable pads make the landing no heavier than a normal parachute descent. The module is very akin to a space capsule and as part of the aircraft's wings are left attached to it, a high stability factor during the ejection sequence is achieved. In the event of descent into water, the module automatically rights itself and flotation bags keep it buoyant.

The F111 was the first aircraft to fly with after-burning turbo-fan engines which provide a wide range of settings for fuel economy and maximum performance. The landing gear depends on one main strut which replaces the multiple linkage systems used on other aircraft, and this allows the undercarriage to absorb very heavy stresses in rough field landing conditions. With a range of 3,000 miles and the ability to approach its targets at high altitude or



**Top of page** Drawing by Martin Holbrook depicting an F111E of the 79th Tactical Fighter Squadron, 30th TAC Wing, Upper Heyford. Camouflage two-tone green and tan upper surfaces with matt black under surfaces. Codes light grey or white, fin code red. **Left** F111E of the 20th TFW taking off from Upper Heyford on May 29 1973 (R. L. Ward).





very low level, by use of its terrain following radar, the F111 makes a formidable opponent and is an extremely valuable weapon.

The Airfix kit is of the basic F111A aircraft and is accurate in most respects for this machine. But the F111E is more commonly associated with the USAF — although less were built than the A — and to convert the kit to this version is a pleasant and worthwhile task.

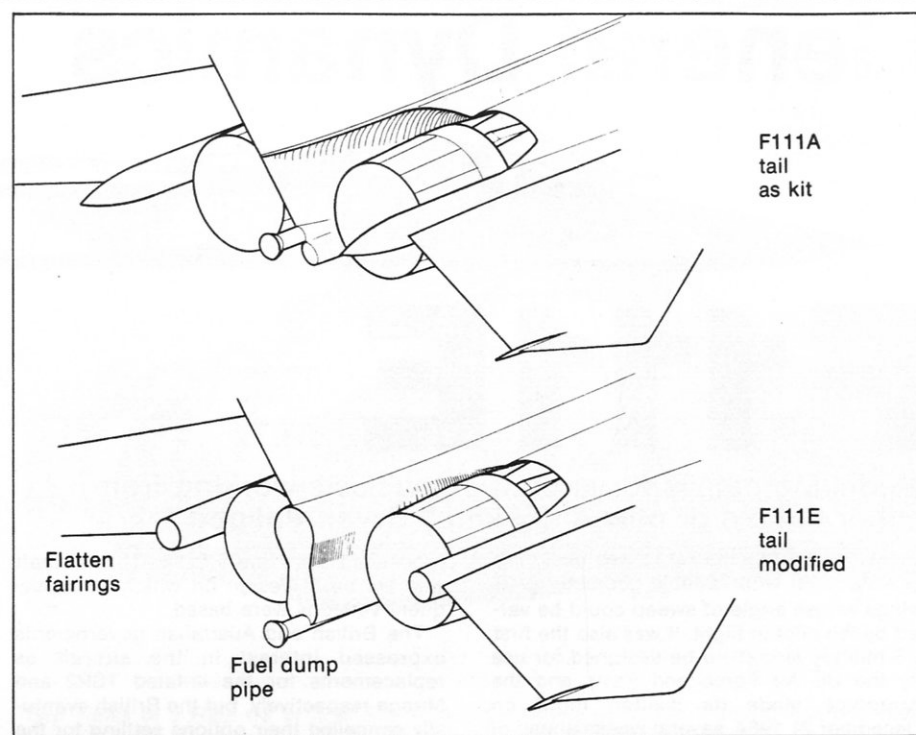
One of the most noticeable deviations from the usual plastic kit is that the fuselage halves are split along their horizontal axis rather than the more common vertical. This makes joint hiding a much easier task and overcomes the problem of a 'flat' top to the fuselage if the joint scraping is carried out too enthusiastically, which sometimes happens on vertically split fuselage halves.

It is the fuselage of the Airfix kit where most changes have to be carried out but these are simple and should not be beyond the skill of those who have not tackled any form of modification work before. Start by assembling the fuselage components as the kit instructions. These show the tailplanes to be fully movable but this feature is very weak and can easily be broken off during subsequent work, so it is probably best to leave these off and fix them on after the work has been done. This will prevent them being adjusted but it is a small price to pay for the frustration that will occur if they are assembled at the very beginning.

The fairing, parts 24/25, inserted between the tailplanes, should be cemented together but before it is attached to the fuselage the rear end cut off in a vertical line. A new rear end cut from plastic card to the shape shown on the drawing is attached to the fairing and smoothed into the contours with body putty, until the shape is as shown. When this work has been completed it can be cemented in position and the fuel dump pipe added to its base. The jet pipes and flame chambers are angled down in the Airfix kit whereas they should point slightly upwards. To achieve the correct angle, remove the locating pegs in the flame chambers, parts 26/27, and cement them in position 180 degrees displaced from their original position. Remove 2 mm from the jet pipes, parts 28/29, and place these in position, it will now be seen that these components angle upwards away from the base line of the fuselage.

To complete the work in the tail area, do not cement the pointed fairings, parts 30/31, to the model but extend the moulded protrusions where these fit by 12 mm by using plastic rod or sprue of the correct diameter. These protrusions end in a blunt area as shown on the drawings.

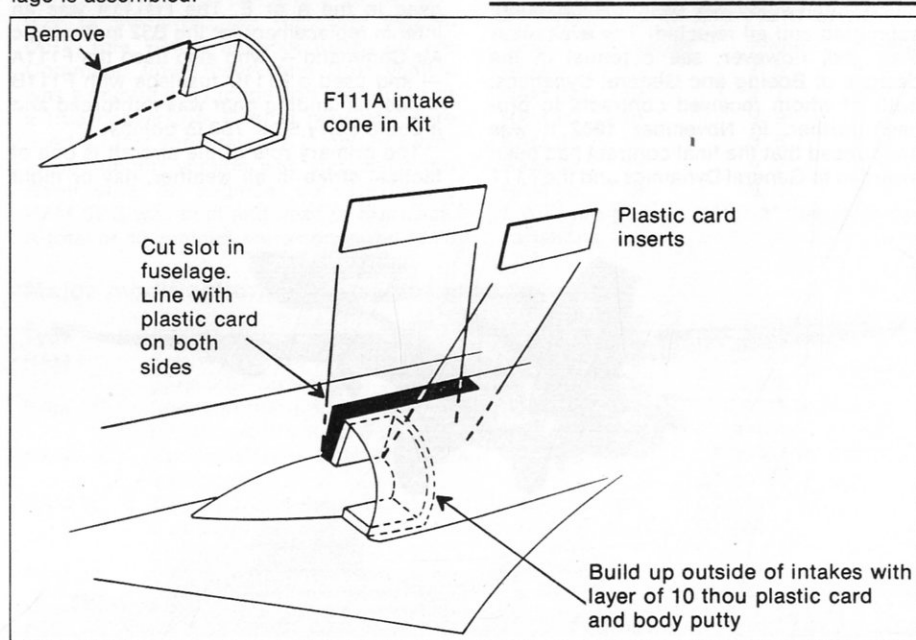
The next step is to modify the intakes to the later design of the E and this is done by cutting slots 2 mm wide at the base of the intake back as far as the angle of the undercarriage bay. A new plastic card wall for the intake is then inserted, angling it from the outside edge of the cut to the inside edge of the top line of the intake, which results in a small gap between the main fuselage wall and the intakes. Two laminations of 10 thou plastic card are then cemented to the outside of the intakes, using the line moulded on the fuselage as a guide, and when these are dry they are faired in with body putty before being sanded smooth. These two laminations



have the effect of widening the intake diameter.

The rear plates moulded onto the shock cones, parts 1/2, are removed and the cones cleaned up before cementing in position, which is slightly forward of that shown on the kit instructions. A good guide is to line up the pointed fronts of the cones with the rear line of the cockpit escape module. It may be found better to do the work on the intakes before the main fuselage is assembled, but this is a choice that remains the prerogative of the modeller concerned.

If wing tanks — which are not included in the kit — are to be fitted, the variable wings cannot be changed unless the pylons carrying the tanks are made to pivot as they do on the real F111. This work can be done but it must be carried out before the wing halves are joined, and must therefore be done as the first operation before the fuselage is assembled.



Drill holes through the under surfaces of the wings, parts 4/6, in the positions where the wing pylons are located, one hole for each pylon. Through these insert 1/8 inch diameter rods cut from plastic rod, and fix end caps cut from scrap plastic card to the ends of these to retain them inside the wings. Make sure no cement gets onto the area between the retaining caps and the wing inside surfaces. Now drill holes in the pylons — which are made from plastic card shaped to the correct cross section — and cement these to the ends of the rods only. It is essential that they are attached as close to the wing surfaces as is possible but that no cement gets between the base of the pylons and the wings. The tanks from a Hasegawa A6 are about the right size for the F111 but will require the addition of plastic card fins. This modification means that when the wings are swept back or for-

Continued on page 394



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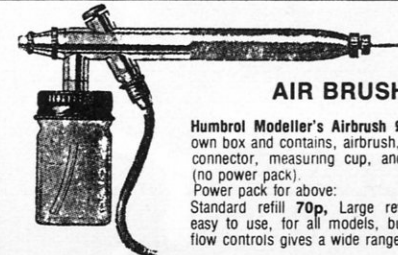
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54 mm

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NAP 2 Old Guard Officer		
NAP 3 Old Guard Grenadier		
NAP 4 Guardsman—Horse Chasseurs		
NAP 5 Hussar Trooper (Elite Co.)		
NAP 6 Light Infantry Officer		

### THE ARMIES OF WELLINGTON

WEL 1 The Duke of Wellington		
WEL 2 Line Infantry Officer		
WEL 3 Line Infantry Private		
WEL 4 Highland Officer		
WEL 5 Highland Private		
WEL 6 Light Infantry Officer		
WEL 7 Light Infantry Private		
WEL 8 Rifle Brigade Officer		
WEL 9 Rifle Brigade Private		
WEL 10 Scots Greys Private		

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The Black Prince

KN 2 The Dauphin of France

KN 3 Nobleman in armour 1400

KN 4 Knight in armour 1400

KN 5 Knight in armour 1415

KN 6 Knight in Transitional armour 1330

KN 7 Knight in Crecy armour 1345

KN 8 Knight in Italian armour 1465

KN 9 Knight in Gothic armour 1480

KN 10 Crusader in surcoat 1200

KN 11 Knight in Helm 1250

KN 12 Knight in Crested Helm 1285

KN 13 French Crossbowman 1340-1440

KN 14 French Foot Soldier 1340-1440

KN 15 English Foot Soldier 1340-1440

ALL 50p PER KIT

### THE ULTIMATE IN KITS

THE ELEPHANT 88 mm A 1 GUN Model 43/2

TANK DESTROYER TIGER (P) Scale 1/16 by IMAI

Full machined brass gears — turned gun barrel — cast metal tracks — turned

aluminium dual bearings with cast and machined suspension and torsion bars

— cast metal drive sprockets and free wheels — Turret and Hull in plastic.

This kit can, if desired be radio controlled, radio control equipment not included.

Price of kit £120 plus VAT

Three ways to obtain this kit:

1. Cash less extra 5% discount.

2. Pay £10 deposit for this fabulous kit which will be reserved for you on receipt of your deposit. Then pay the balance off to suit yourself over the next 12 months. The kit will be sent to you on completion of your payments.

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### BADGER SPRAYS & AIRGUNS

100XF Fine Line airbrush with

cup £30.00

1001L Fine Line airbrush with

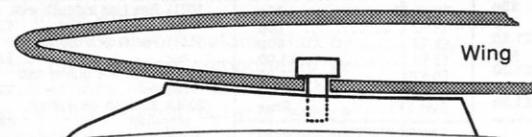




Author's F111E model showing alterations to tail area (Dermot de C. Robinson).

There are no exact equivalents in the Airfix paint range to the camouflage colours used on the three-tone finished aircraft, but very close matches can be produced by using, M5 mixed in the proportion 2-1 with white, for the brown; M3 with just a touch of black for the darker green, and M20 for the light green. □

**Stop Press** We have just received confirmation that Airfix will be re-releasing their F111 kit in 'E' configuration later this year. However, the new kit will still not feature drop tanks, so this article will still provide useful information for those modellers super-detailing the new kit. **Ed.**



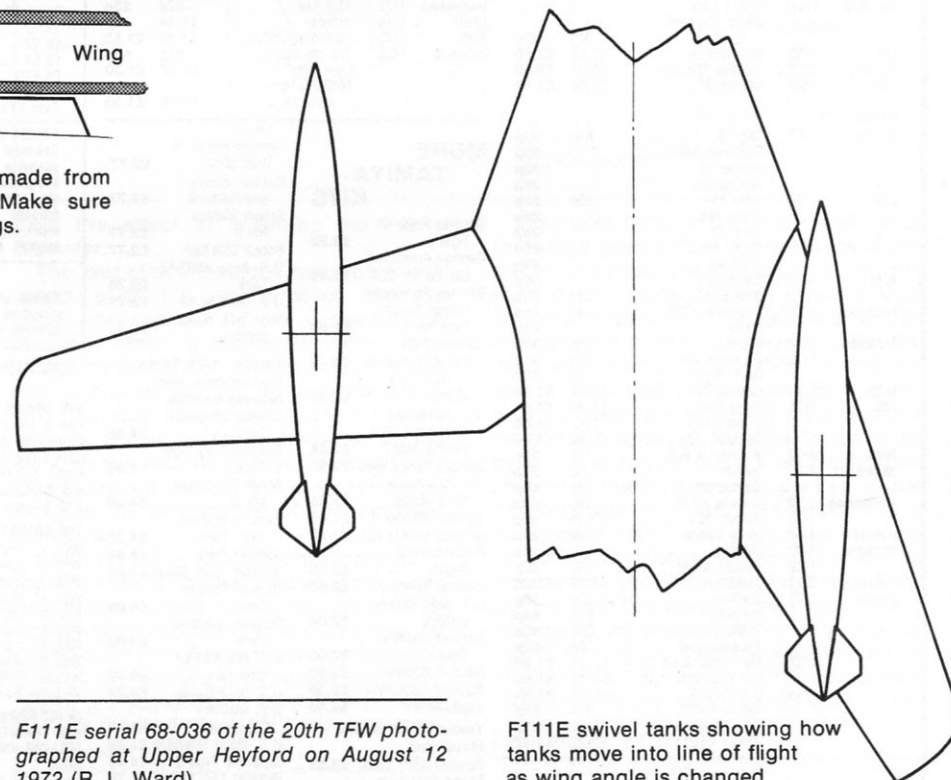
Drill hole in wing undersurface. Insert peg made from sprue or plastic rod. Cement into pylon. Make sure cement does not come into contact with wings.

#### Continued from page 392

ward the tanks can also be moved to the same degree.

If swivel tanks are not fitted then the model will have to be displayed with its wings set in one position otherwise, when the sweep angle is changed, the tanks will point outwards at odd angles. Naturally the fitting of wing tanks is an option but in my opinion their addition greatly enhances the appearance of the completed model, and is almost certain to provoke discussion as to how the work in making them adjustable has been carried out.

The drawing shows an aircraft of the 79th Tactical Fighter Squadron finished in three-tone camouflage on the top surfaces and matt black underneath. There are many alternatives to this scheme including the grey/white finish depicted in the Airfix kit, and a camouflage scheme similar to that shown but with grey undersurfaces.



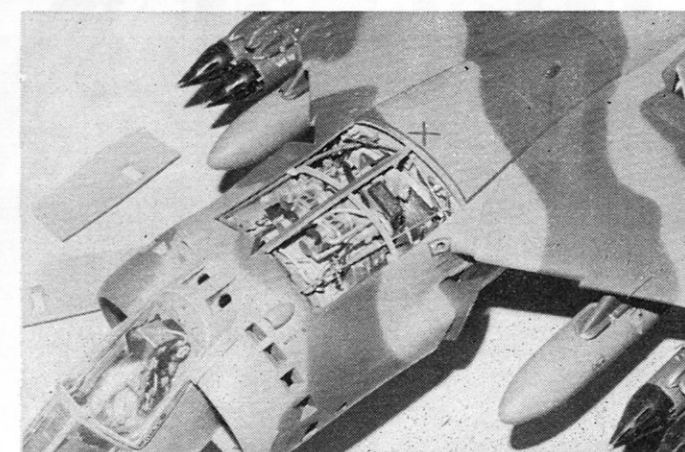
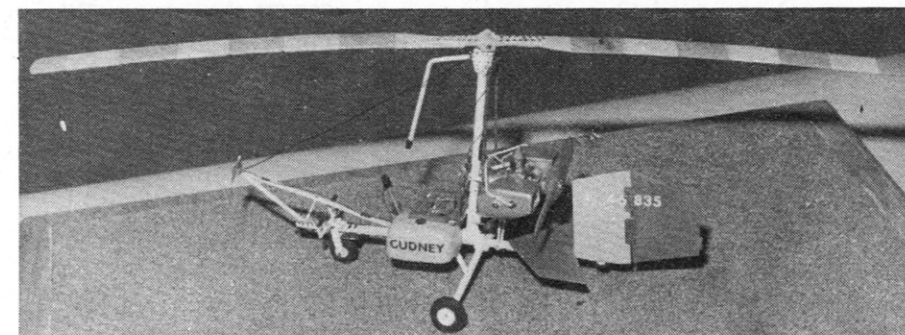
F111E serial 68-036 of the 20th TFW photographed at Upper Heyford on August 12 1972 (R. L. Ward).

F111E swivel tanks showing how tanks move into line of flight as wing angle is changed



## National champs

Report from **Bruce Quarrie**. Photos by **Julian Edwards**



THE INTERNATIONAL Plastic Modellers Society national championships were held in December at the RAF Museum, Hendon, for the third year running, and attracted a good turn-out of members from all parts of the country. The standard exhibited in all classes was very high indeed, but it is noticeable that the main emphasis — and the best modelling — at IPMS meetings is still with aircraft, although military models are increasingly in evidence. Judging in all classes was extremely difficult — and made more so by the dim lighting in the exhibition area, something the organisers would do well to correct, if possible, before next year.

The National Champion this year finally emerged as — wait for it — yes, Tony Woollett, for his superb scratch-built DH 60 Cirrus Moth, while the Junior Champion was P. Newton with a lovely model of a Benson Gyroplane which would have deserved credit in a senior class. Airfix's John Edwards Memorial Trophy went to W. Newton for his magnificent 1:24 scale Harrier GR 1, while the Tony Woollett Trophy was awarded to John Rixon for his Vauxhall staff car. An idea of the general standards can be seen in our accompanying photographs, courtesy of Julian Edwards, although there is not space here to list all the prizewinners in every class.

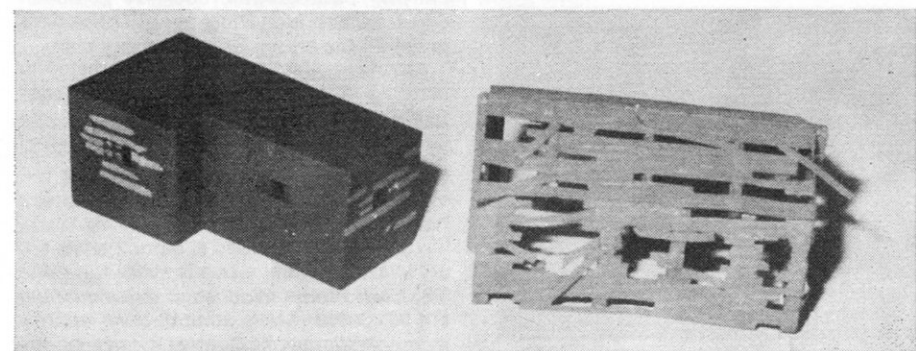
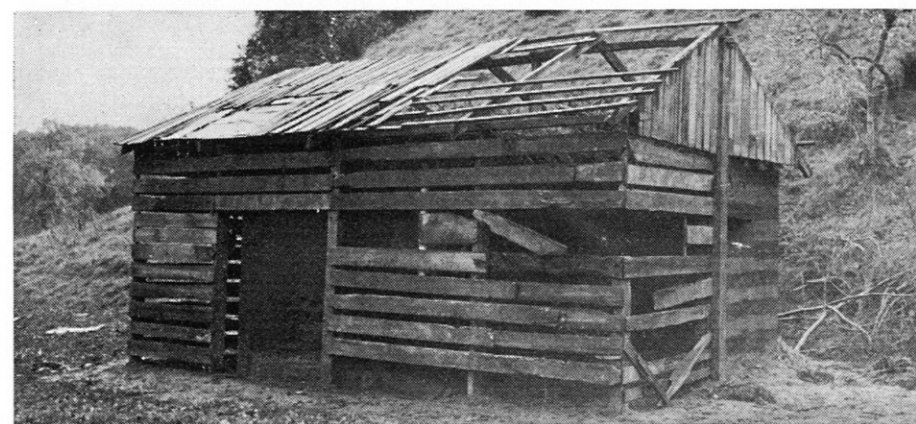
Any Airfix Magazine reader interested in learning more about the IPMS should contact the Hon Secretary, IPMS, 35 Clares Green Road, Spencers Wood, Reading RG7 1DY. □

**Top left** Tony Woollett's prize-winning DH 60 Cirrus Moth scratch-built entirely from plastic card. **Centre** Winner of the Junior Championship, this scratch-built Benson B-8M autogiro was made by P. Newton of Birmingham. **Left** 1:48 scale team effort by IPMS members serving at the Army Apprentices College, Arborfield, depicting Afrika Korps vehicles unloading at Tripoli, was entered by the Berkshire Branch. **Bottom left** Another class winner was this figure group by David Hunter entitled 'Stand still, damn you!' **Below** Detail view of W. Newton's 1:24 scale Harrier which won the John Edwards Memorial Trophy.



# Modelling inland fortifications

Continuing our series on Operation Sealion  
by Terry Wise



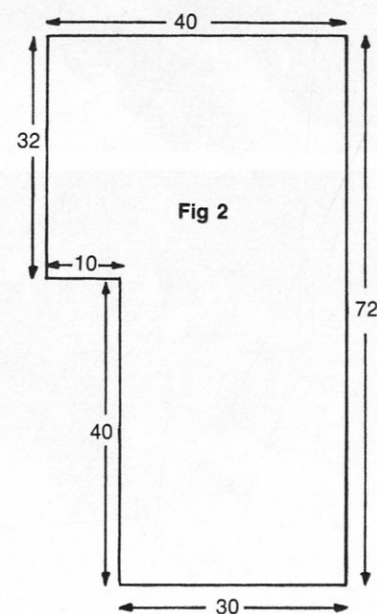
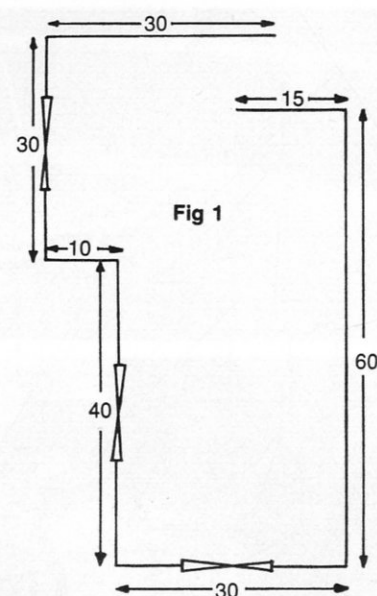
**Top** A ruined hut, a hide for what appears to be a rectangular gun emplacement or pillbox with L-shaped barrier covering the entrance. There seem to be two firing slits, one facing the camera and the other facing the right of the picture. **Above Fig 1** gives the measurements for the pillbox on the left, which has three apertures to give a better field of fire. Height 30 mm, apertures 12 x 5 mm (bottom edges 16 mm up from base) with splayed effect created by scraps of card cemented to inner surface. Roof as **Fig 2**. The model on the right is a hide of plank-embossed card with posts of 1/8-inch balsa. Height 30 mm except peaks of end walls, which rise to 40 mm. End walls 50 mm long with one 40 mm post cemented to centre of outer face. Front and rear walls 75 mm long with five 30 mm posts cemented to inner face at 15 mm intervals. 25 x 10 mm doorway in rear wall and lined up with pillbox entrance. Large pieces then removed from walls and odd planks cemented on to create ruined effect, making sure slits are kept clear. Matchstick rafters are attached to 1/8-inch balsa beam, the ends of which are glued to vertical beams of end walls. Planks form roof. **Below** This appears to be an adaptation of the standard six-sided pillbox, built in concrete and painted to resemble brick! I took the easy way out and modelled in brick card (see page 398). The boards are in the East Kent livery colours, red and yellow.



FORTIFICATIONS away from the coast concentrated to a large extent on defence against air landings and barring the way to panzer thrusts. Open spaces were dotted with posts to prevent gliders and troop-carrying Junkers from landing, and long, straight stretches of main roads were covered with pergola-like structures for the same reason. The police were armed to cope with parachutists; church bells were to be rung only as a warning that parachutists were descending; station and road name plates and signposts were removed; government offices and other important public buildings were screened by barbed wire and sandbags, with armed sentries at the entrances; and all vehicles had to have the rotor arm removed if left unattended. In Poland and France the Germans had refuelled their vehicles at abandoned garages; arrangements were made to guard all such petrol points so that they could be blown up before they fell into enemy hands.

Along the route of the GHQ Line the countryside became covered by a winding snake of A/T ditches, pillboxes, concrete

Continued on page 398



# Panzerknacker. Stuka turned tank buster

## Kennedy's boat in big 1/72nd!

Small, lightly-gunned, but packing a huge punch in the form of four torpedoes, the US Navy's Mosquito boats were a real thorn in Nippon's side. And that punch and power can be all yours with this detail-packed 1/72nd scale kit of a Patrol Torpedo Boat. You can finish it in two different ways. As PT 109, commanded by Lt. John F. Kennedy USNR in the Pacific in 1943, for one. This boat was sliced in two by a speeding ship and after a four-hour swim eleven survivors—one of whom was to become President—were rescued. Or you can make PT 167, involved in an anti-aircraft action in 1943 and hit by a torpedo which didn't explode. Take your choice. Either way you'll build an exciting little model that's bristling with machine guns, torpedoes and cannon.



The world's largest manufacturer of plastic model kits.

Nicknamed Panzerknacker — Tank Cracker—by its crews, the Ju87 G-2 was a heavily-armed version of World War II's most famous, most feared dive bomber. And here's Revell's long-awaited 1/72nd scale version of this formidable warplane. And it isn't only a tank-busting Stuka! This kit contains 37mm Flak 18 cannon for the G-2 version and bombs—one 550 pounder and four 110 pounders—to make the D-5 dive bomber variant too. The Jumo 211J engine is in close-up detail, and so is the rear-mounted MG 81Z machine-gun. So build this startling kit and you can capture that fearsome Stuka power for yourself. It's in the shops now. And there's an even more detailed 1/32nd scale kit of the 87B variant there too. Look for them both—today.



Fine model kits



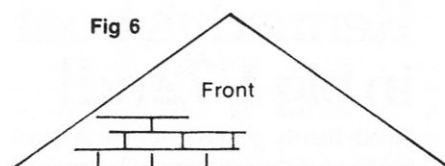
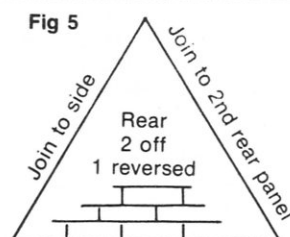
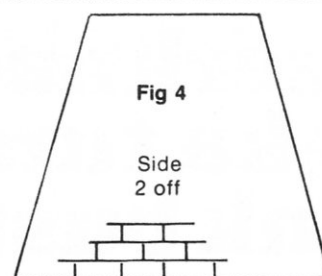
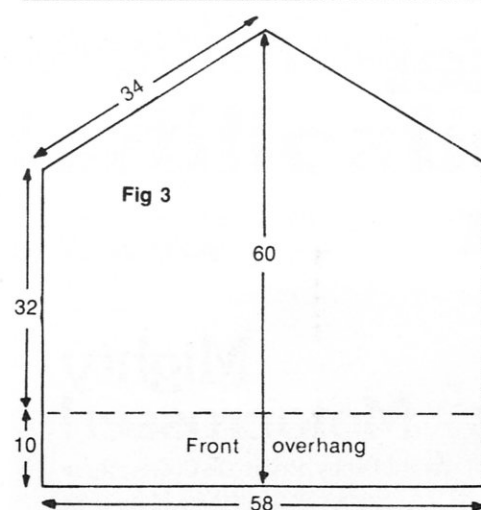
## Mighty Motocrosser!

As ridden by Roger De Coster, three times World 500cc Motocross Champion. A sleek, powerful, rugged Suzuki factory bike in real down-to-earth 1/12th scale detail. Muscular 370cc racing engine, number plates, fuel lines and electrical leads, flexible control cables—the detail really has to be seen to be believed. And it's just one of the amazingly lifelike bikes in a Revell range which goes from the famous BMW police bike to the almost unbelievable Chain Gang Chopper. Every kit has real rubber tyres and beautifully-detailed chrome finish parts. Drag bikes, dirt bikes, race bikes, street bikes—Revell brings out the precision best in them. See them all in Revell's 1976 catalogue, just 20p in model stores now!

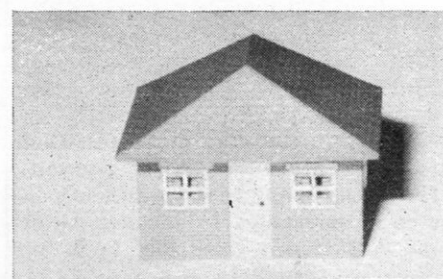


Revell (GB) Limited,  
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Herts. EN6 3JX.

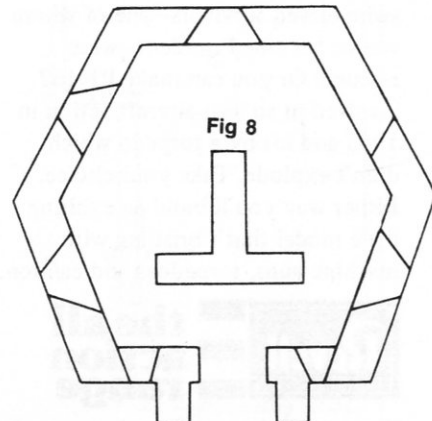
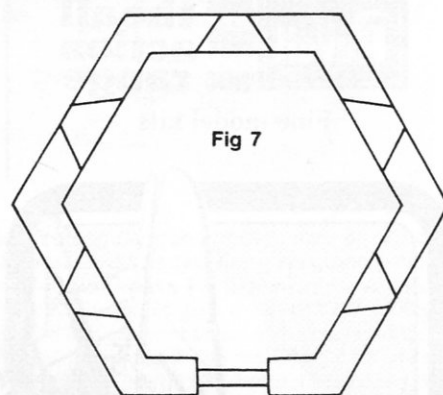




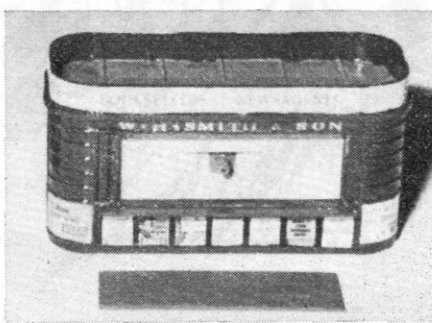
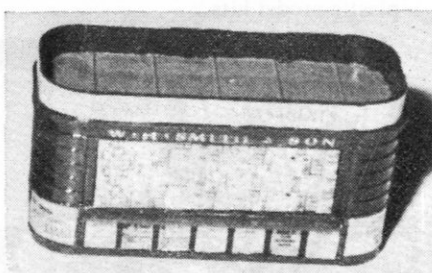
Figs 4, 5 and 6 actual size



Camouflaged pillbox. Four sides are 30 mm square with 8 x 5 mm splayed apertures. Vertical edges mitred. Add lintels and false frames of microstrip. The fifth side is 50 mm long by 30 mm high with 25 x 10 mm doorway. Apertures as before. Cement five sides together and add 'ceiling' (Fig 3) and five roof panels (Figs 4, 5 and 6). To finish the model add 6 x 8 mm timetable board and 4 x 30 mm East Kent boards.

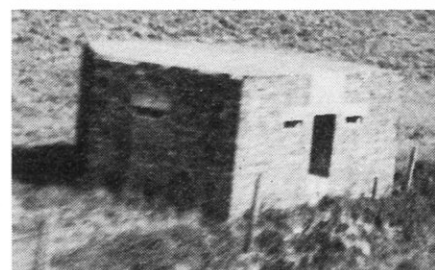


Below Dummy W. H. Smith news stand at Westminster. Below right Conversion from the Airfix Station Platform kiosk. Replace shelf for magazines with smaller shelf on outside to provide space inside. Replace one 'front' panel with 40 thou card, including in it a 25 x 10 mm doorway. Block door in end section to match other end. The new rear wall forms rear of gun emplacement in concrete — measurements 57 mm long by 25 mm deep and 30 mm high — just clearing the roof locating lugs. Splayed aperture in front is 20 x 5 mm. Roof as kit, left detachable. Gun is 12 mm length of tube with shield cut from larger tube, all mounted on balsa stand. Drop-out panel is 50.5 x 15.5 mm. Flaps cemented to main body of model prevent panel falling inwards.



# Dassault-Breguet and their aircraft

A special report on France's largest private aerospace organisation from **Peter F. Guiver**



Standard six-sided pillbox in brick, guarding main railway line from London to south coast, photographed from a moving train, hence blur!

dragon's teeth and other obstacles. Because of the urgency much of this work was given to unsupervised civilian contractors and this led to appalling blunders. Large numbers of road blocks and A/T obstacles were totally ineffective because vehicles could quite easily go round their flanks. Some pillboxes were built facing the wrong way, or were so placed as to be positively dangerous to the occupants, or they served no useful purpose at all.

Almost all gun emplacements and pillboxes were 'camouflaged' in some way to prevent discovery by enemy Intelligence, by air reconnaissance, and finally by the unsuspecting, advancing German infantry. Three typical examples of this camouflage are shown by the war-time photos and the other illustrations give full modelling details.

Fortifications such as those described above might be positioned individually to protect road junctions, as in the case of the bus shelter; or might be strung in chains across the countryside to guard rivers or land drainage ditches, which formed natural obstacles to mechanised formations; or to overlook main roads from high ground; or simply to sweep any advance made across a wide expanse of open land. Construction was usually of reinforced concrete, though many pillboxes were also built of brick. The most common shape for pillboxes was six-sided, either with a steel door at the rear (Fig 7) or with an open doorway protected by a T-shaped barrier situated just inside the pillbox (Fig 8). Each face of these pillboxes was usually 7 feet long by just over 7 feet high and had an aperture about 12 inches high by 10 inches wide, splayed to 32 inches on the inside, although most 1940 examples seem to have reversed this and had the splay on the exterior.

Standard six-sided pillbox in concrete in South Wales.



THE AEROSPACE industry of France is somewhat similar to that in Great Britain, comprising two main airframe manufacturing companies, each having been formed out of the merging of several older firms. Unlike Britain however, France has a number of smaller undertakings that offer a wide range of highly successful light aircraft.

The two main organisations are the nationalized Societe Nationale Industrielle Aerospatiale with such products as Concorde, A-300 Airbus, the Alouette range of helicopters and the Rallye series of light aircraft, and Avions Marcel Dassault/Breguet Aviation, which is privately owned and the subject of this article. In addition there is a large state-owned aero engine company, the Societe Nationale D'Etudes et de construction de Moteurs D'Aviation (or SNECMA), together with a smaller private counterpart, Turbomeca.

The Dassault company was formed in 1945 and since then has produced a number of successful fighter types, including the Ouragan, the Mystere IV and the Super Mystere, and the Mirage family. The Breguet company can be traced back to 1911, but was taken over by Dassault in 1967, the two firms merging completely in 1971. Today, Dassault/Breguet employ some 15,000 people in factories throughout France, with a working area of 700,000 sq m, with current activities and future projects outlined as follows:

## Civil aircraft

The Falcon family. Now in its tenth year of

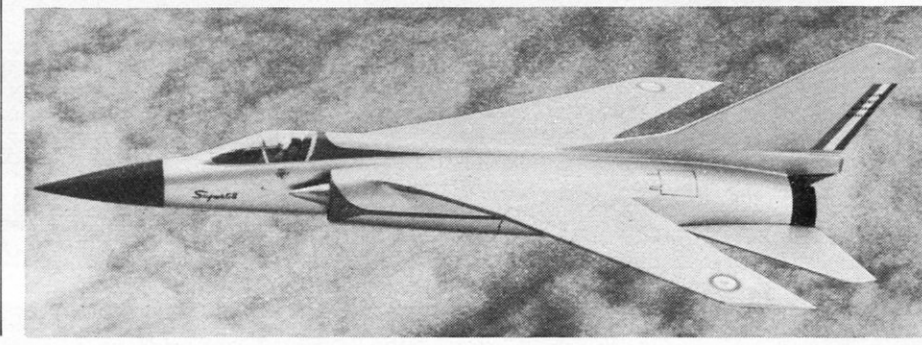
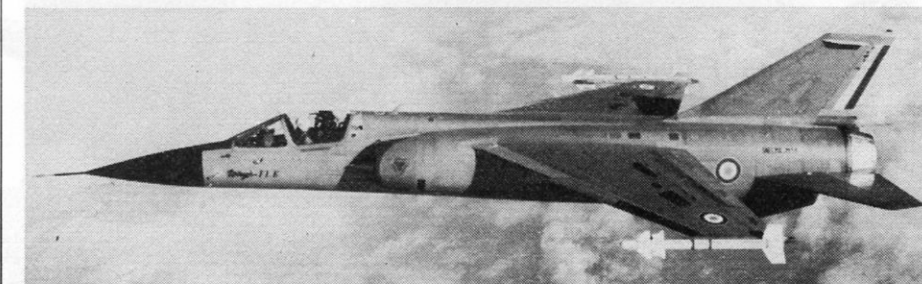
production, the Falcon 20 (originally known as the Mystere 20) has proved to be a most successful aircraft, with over 360 machines sold, some 220 of these being to the USA. With seating for eight to 12 passengers, the Falcon 20 is employed on numerous tasks in addition to executive travel, including scheduled airline services, airline crew training with Air France, UTA and Japan Airlines, and navaid calibration duties. 21 governments and air forces use the Falcon 20 for VIP operations, and the Federal Express Corporation employs 33 aircraft on parcel, mail and light freight services from its Memphis, Tennessee, base.

In 1973 the first production Falcon 10s appeared, and this four to seven seat jet has now received 81 firm orders and over 90 options, mainly to the USA. Two Falcon 10 MERs have been ordered by the French Navy for the radar training of Super Etendard pilots, and further orders from this Service are expected.

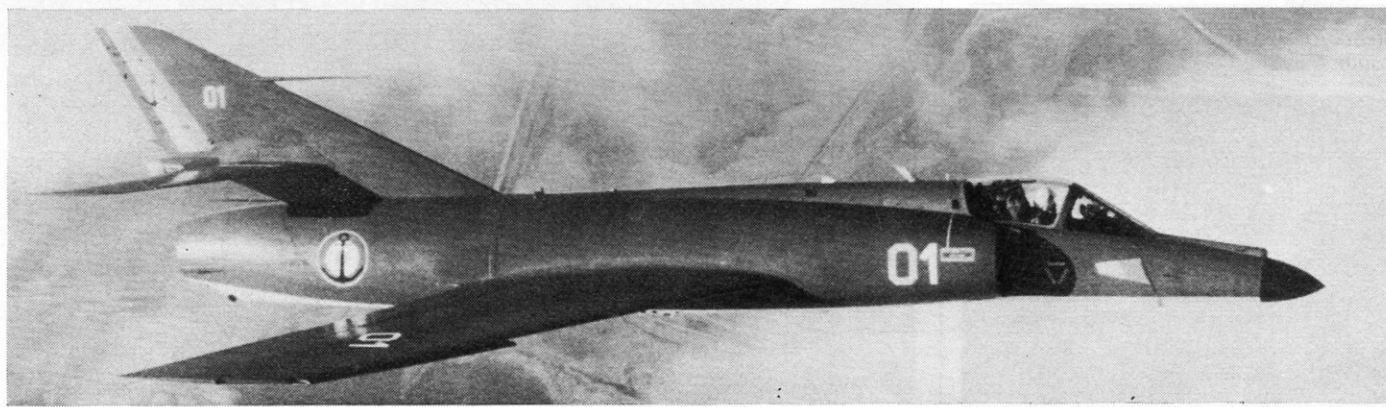
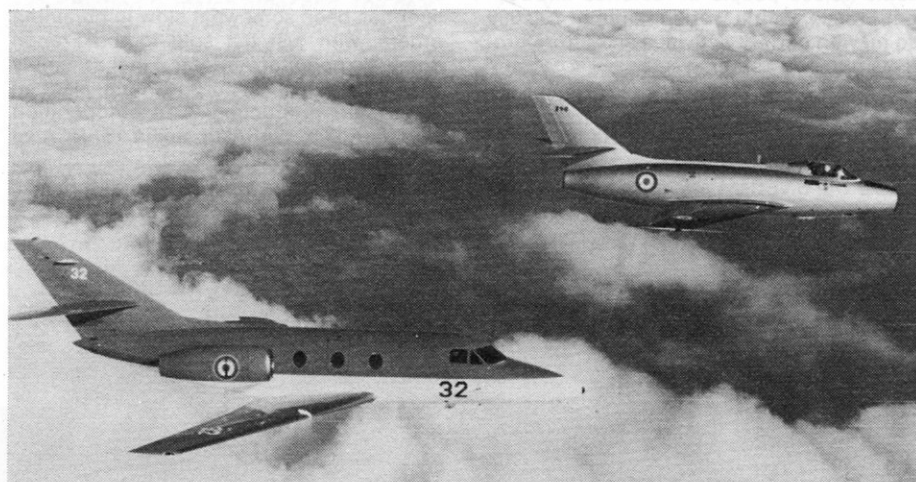
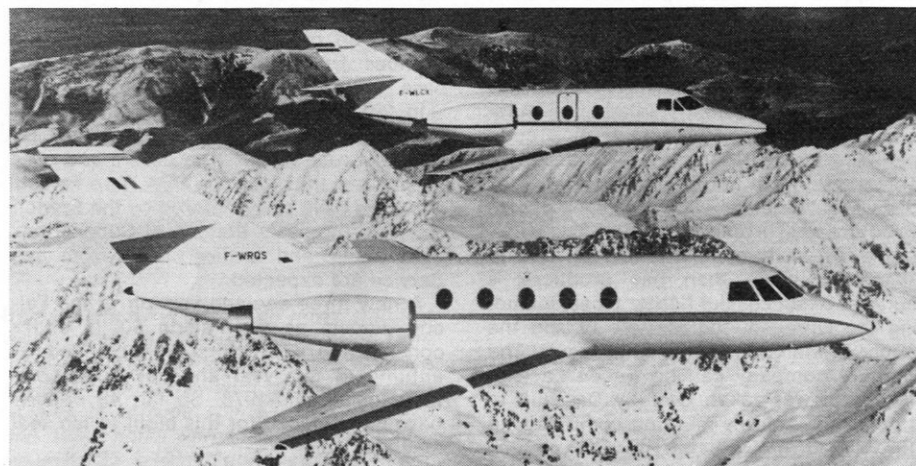
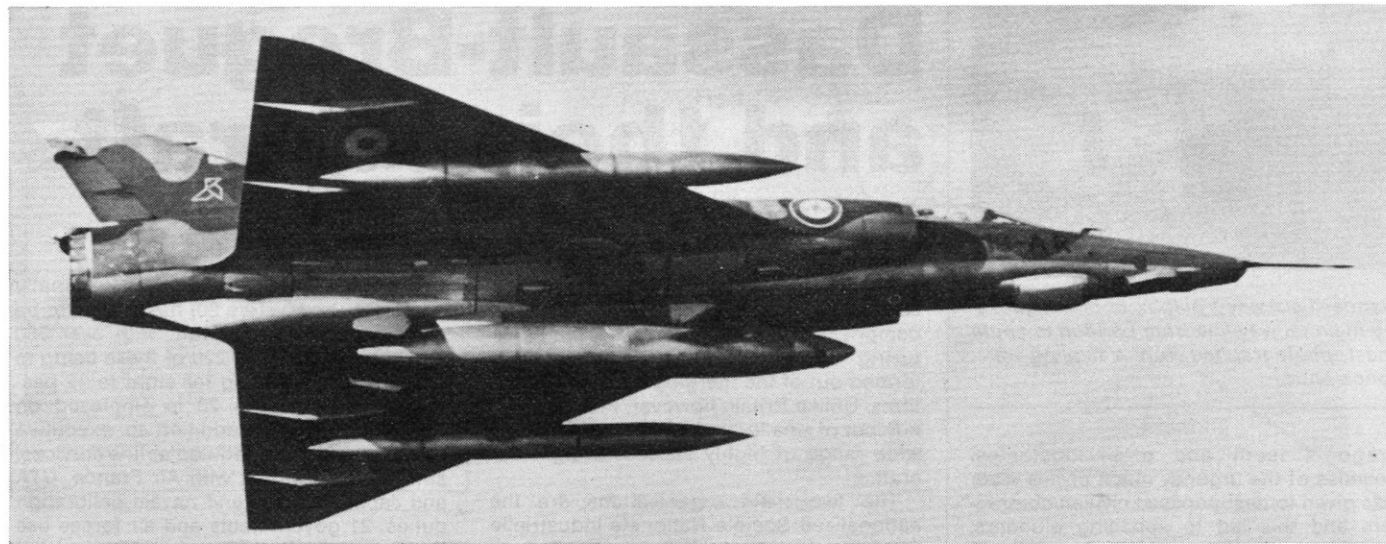
A new three-engined version of the Falcon, known as the Falcon 50, is under construction, with its first flight planned for autumn of this year and deliveries commencing in mid-1978. So far, 49 options have been placed for this eight to ten seat machine.

*Mercure*. This short/medium range airliner has been somewhat slow in obtaining orders, with just ten sold to the French domestic operator Air Inter. Final assembly is undertaken in a purpose-built plant at Istres, and production is in co-operation with Aeritalia, CASA of Spain, SABCA of

Below The SNECMA M53-powered Mirage F1E carrying two Matra Magic air-to-air infra-red missiles at the wingtips. Bottom An artist's impression of the proposed 'Super Mirage' (Dassault-Breguet photos).







**Above** Mirage IIIIR reconnaissance fighter, with the fin badge of ER3/33. **Left** The best-selling Falcon 20 (foreground), with the smaller Falcon 10 beyond (Dassault-Breguet photos).

Belgium, F and W of Switzerland and Canadair. The Mercure entered service in June 1974, and is powered by two Pratt and Whitney JT8D-15 turbofans each of 7,030 kg/15,500 lb static thrust, with seating for up to 150.

#### Military aircraft

*Atlantic*. 87 of this maritime patrol and anti-submarine aircraft were produced for France, West Germany, the Netherlands and Italy, the last being delivered in July 1974. However, an improved version, the Atlantic Mk II is being planned, with completely updated electronics and weapons systems, whilst yet another variant, the Mk 2B would have the existing powerplants supplemented by two SNECMA M 45H turbofans.

*Mirage III/Mirage 5*. One of the most successful modern fighter aircraft, this series of delta-winged machines has gained sales of almost 1,300 to 18 nations, over 420 of these being for the Mirage 5

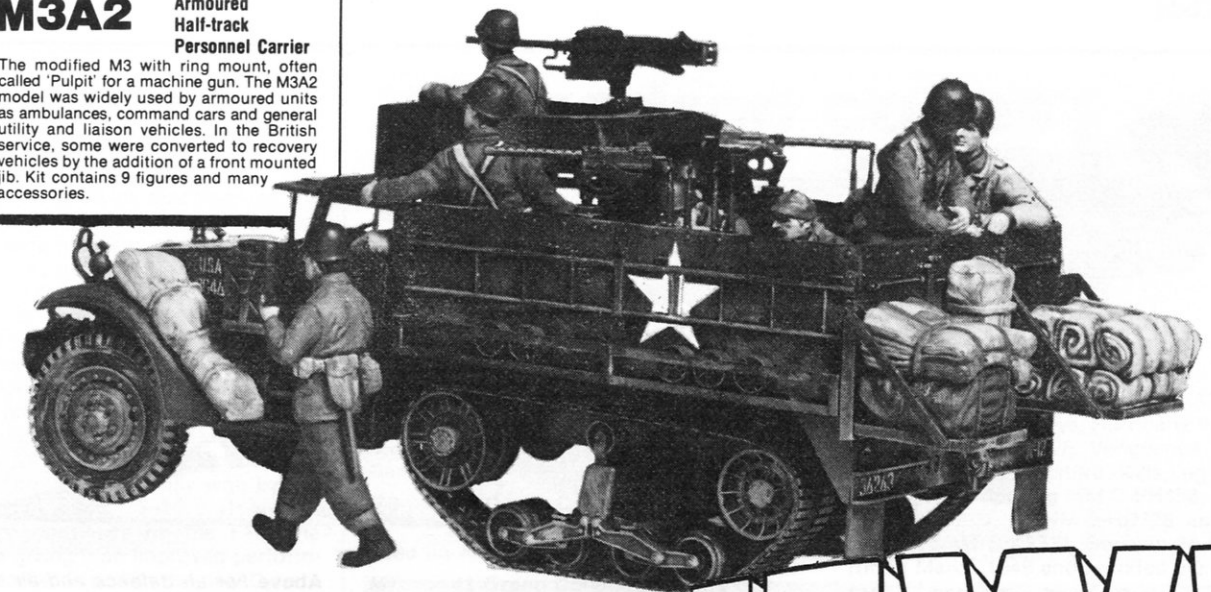
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**Left** A new Falcon 10MER for the Aero-navale in dark grey and white, in formation with an earlier Dassault fighter, the Mystere IV. **Below** The first prototype of the new Super Etendard naval strike aircraft. Colours are dark grey and white (Dassault-Breguet photos).

#### M3A2

Armoured  
Half-track  
Personnel Carrier

The modified M3 with ring mount, often called 'Pulpit' for a machine gun. The M3A2 model was widely used by armoured units as ambulances, command cars and general utility and liaison vehicles. In the British service, some were converted to recovery vehicles by the addition of a front mounted jib. Kit contains 9 figures and many accessories.



IN 1/35 SCALE



#### HUNTING TIGER

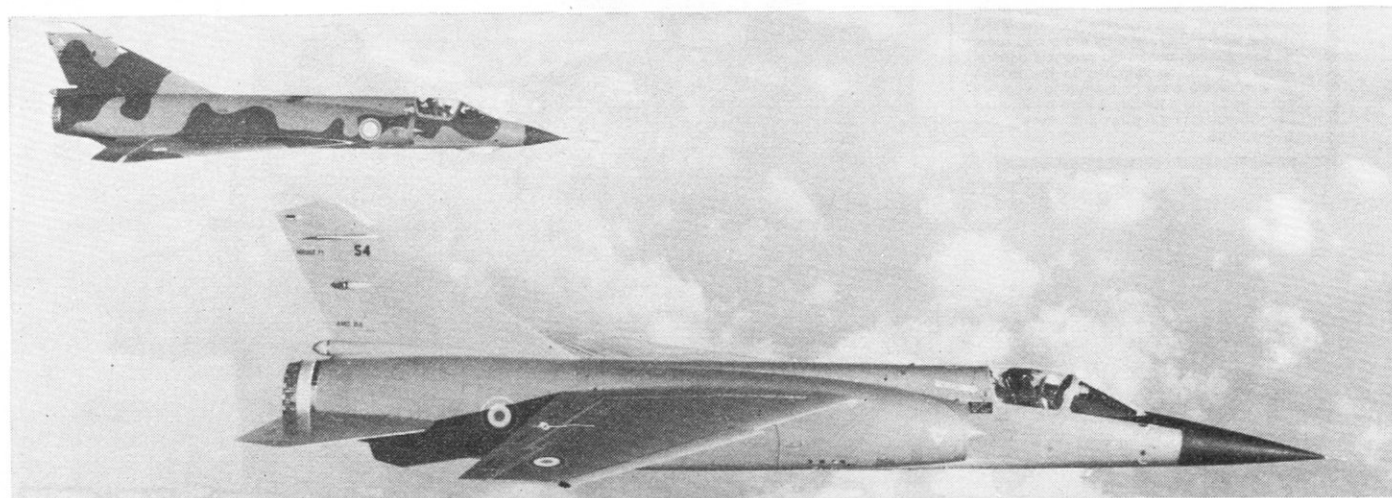
"Jagdtiger" the tank intended to halt the Allied advance at the end of W.W.II. It was extremely heavily armoured with steel plate and an enormous 128 mm gun. It was first used in the summer of 1943 against the Russians and later against the British and U.S.A. forces during the invasion. Improved kit with Driver and Commander figures.

#### KING TIGER

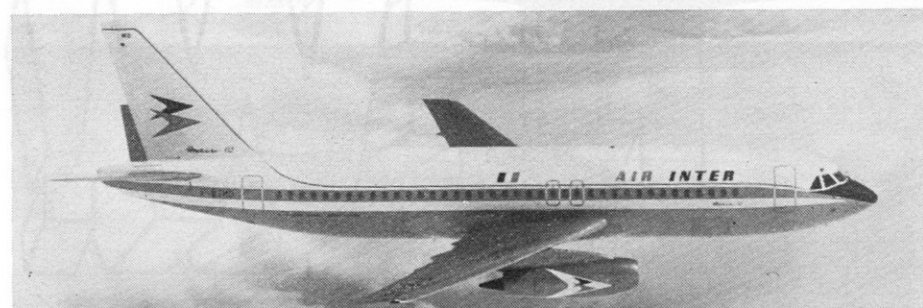
Developed from the Tiger 1. The most powerful tank of W.W.II, its 88 mm gun could penetrate 200 mm of armour at 1,000 yards, it carried a variety of machine guns, its tracks were 32" across and its turret armour over 7" thick! It was sometimes called the Royal Tiger. Kit complete with Commander and Driver figure.







**Above** For air defence and air superiority, the French Air Force uses the Mirage F1C (foreground) with its predecessor, the Mirage IIIE beyond. **Left** Mercure F-BTMD in the colours of Air Inter (Dassault-Breguet photos).

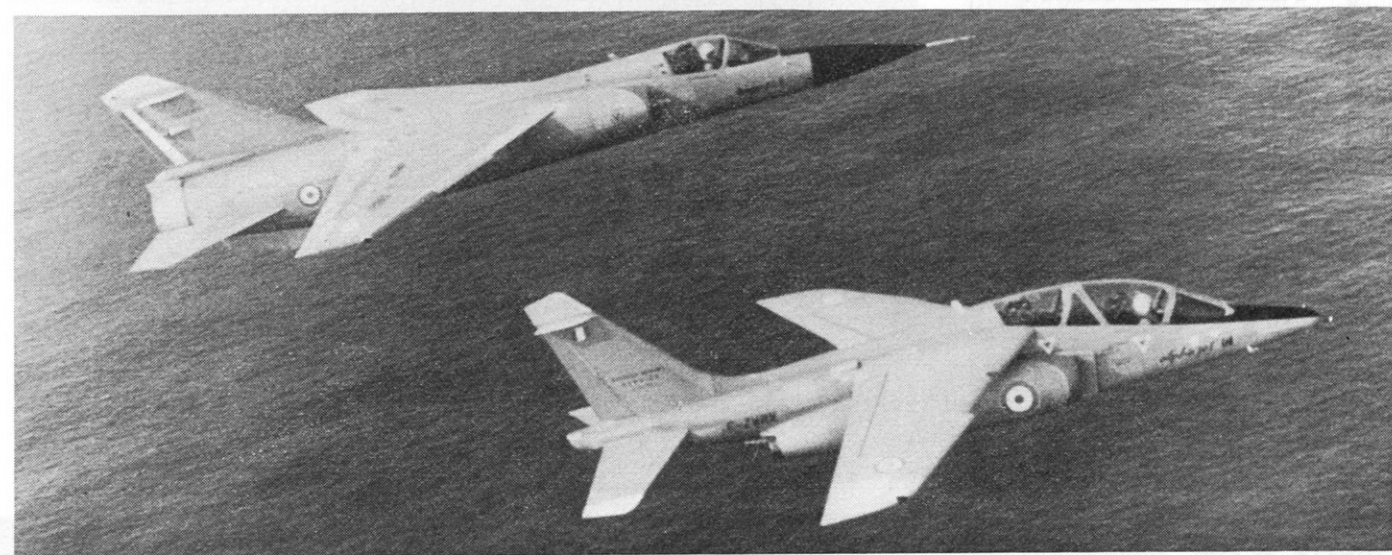


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variant. The Mirage 5 has the same powerplant as the Mirage III, but the electronics have been simplified and the airframe adapted for the ground attack role, with two 30 mm cannons mounted in the fuselage and seven underwing hard points for external loads. Miniaturisation of the electronic systems has enabled the fuel capacity to be increased.

**Mirage F1.** In production at Bordeaux-Mérignac, this Mach 2.2 fighter is now in service with the French Air Force and has been ordered by Spain, South Africa, Greece and Kuwait. Built at the rate of four to five per month, the Mirage F1 is available in a number of variants. The F1A is the basic model, without radar, designed for ground attack; the F1B is a two-seat trainer version, whilst the F1C interceptor has the addition of Cyrano IV radar. All these models are powered by the SNECMA Atar 9K-50 turbojet which gives the Mirage F1 a significant advantage in performance over the Mirage III, ie three times larger duration

**Left** A mixed formation of Jaguar As and Es. **Below** The Alpha-Jet in company with a Mirage F1E (Dassault-Breguet photos).



on patrol, a doubling of combat radius and up to 30 per cent improvement in airfield performance.

For the next generation of combat aircraft SNECMA are developing the M53 turbojet, to be used in machines of the Mach 2.5 class. Some of the test flying of this new engine has been carried out fitted to a Caravelle, but in 1974 an M53 was installed in a Mirage F1, and this new model, known as the Mirage F1E, flew in December of that year. Originally intended as a supersonic flying test-bed, the F1E suddenly found itself pitched into the sometimes bitter battle to secure the contract for the Starfighter replacement orders for Belgium, Denmark, the Netherlands and Norway, which was eventually won by the General Dynamics F-16. However, development continues on the F1E, the M53 engine giving it an improved performance over earlier F1s, with the new Cyrano IV-100 radar offering a multi-role capability. A two-seat version of the F1E is designated the F1D.

**'Super Mirage'.** In 1972 the French Air Force issued a specification for a high performance combat machine (Avion de Combat Futur) for service from 1980 onwards. The Dassault/Breguet design will be powered by two SNECMA M53 engines giving a dash speed of Mach 2.5. Much of the airframe design will be based on the variable geometry Mirage G8 of a few years ago but will feature a fixed wing with 55 degree sweepback. The prototype is due to make its maiden flight in late 1976.

**Super Etendard.** The original Etendard fighter has now been in service with the French Navy for ten years, and naval aviation was thus due for modernisation. A standard Etendard IVM was modified up to Super Etendard specifications, flying as such in October 1974, with a second modified machine following in March 1975. Power comes from a SNECMA Atar SK-50 turbojet, which is a version of the Atar 9K-50 less the afterburner, and this will give a ten per cent increase in power over earlier Etendards. All radar and avionics are completely new, and armament consists of two 30 mm DEFA cannons and five external stores positions. 100 Super Etendards have been ordered for service aboard the French aircraft carriers *Foch* and *Clemenceau*.

**Jaguar.** This aircraft is now well established in service with both the French Air Force and the RAF, with 200 machines ordered for each, whilst Oman and Ecuador both have 12 on order. Jaguars for the French Air Force are assembled at Colomiers near Toulouse, and are produced in two versions, the single-seat 'A' (Appui Tactique) for tactical support, and the twin-seat 'E' (Ecole Avancee) advanced operational trainer. The 'A' differs from the RAFs GR 1 (Jaguar S) in that it is not fitted with a nose-mounted laser rangefinder, and also lacks the ECM housing on the fin.

**Alpha-Jet.** Being produced in co-operation with Dornier, this aircraft will be used by the French Air Force for advanced training, with some 200 on order, whilst the Luftwaffe plan to have a similar number for light tactical support. French production will be at Toulouse, with development testing taking place at Istres. First deliveries are planned for 1977, and Belgium have ordered 33 Alpha-Jets, for production in that country. □

## Squadron codes and colours 1939-56



By Michael J. F. Bowyer and John D. Rawlings

**M5 128 Squadron (c)**  
Reformed September 15 1944, flew Mosquito XXs, eg M5:A-KB199, XXVs, eg M5:V-KB449 and Mk XVI M5:A-MM204. Renumbered 14 Squadron on April 1 1946.

**M6 83 Group Communications Flight (c)**

Used on Ansons, eg C12 M6-PH697.

**M7 41 Group Communications Flight (c)**

Used on Tutor M7-K3367.

**M8 4 Group Communications Flight (c)**

Allocation confirmed, use unknown.

**M9 1653 Conversion Unit (c)**  
Letters allocated for use after unit reformed at Chedburgh November 21 1943. Use uncertain. See A3, H4.

**2M 520 Squadron (c)**  
A meteorological reconnaissance squadron which used Halifax Vs, eg 2M:K-LL518, 2M:H-LL520.

**3M 48 Group Communications Flight (c)**

Used on Proctor IIIs, eg 3M:M-DX196.

**3M 679 Squadron (c)**  
Letters carried by Martinets, eg 3M:Q-HN958 based at Ipswich in the summer and autumn of 1944. Also worn on Hurricane 3M:V-KZ661.

**4M 695 Squadron (c)**  
Formed December 1943 as an AAC unit. Equipped with Henleys, Hurricane IIs, Martinets, eg 4M:B-PX126, Vengeance TT IVs, eg 4M:A-HB545, Spitfire XVIIs, eg 4M:E-TD248, Oxfords, eg 4M:C-PH458, Beaufighter TT 10s, eg 4M:B-RD778 and Harvards, eg 4M:Q-KF331. Became 34 Squadron in March 1949 and recoded 8Q.

**5M 363rd Tac Recon Group USAAF (c)**

Used on P38s/F-5s of 33rd PR Squadron in 1944-45.

**6M 48th Fighter Group USAAF (c)**  
Used on P-47s of the 494 Fighter Squadron April 1944-August 1945.

**7M 1 Parachute Training School (c)**  
Letters allocated in September 1945, no use known.

**8M 266 Squadron (?)**  
Reported as allocated, but no evidence of use.

**9M 1690 Bomber Defence Training Flight (c)**

A fighter affiliation flight attached to 5 Group and which flew from many of its stations. Equipped with Spitfires and Martinets until November 1944, after which Hurricanes were used only. Examples Martinet HP392 and Hurricane LF395 (used March 1 1944 to January 15 1945). □



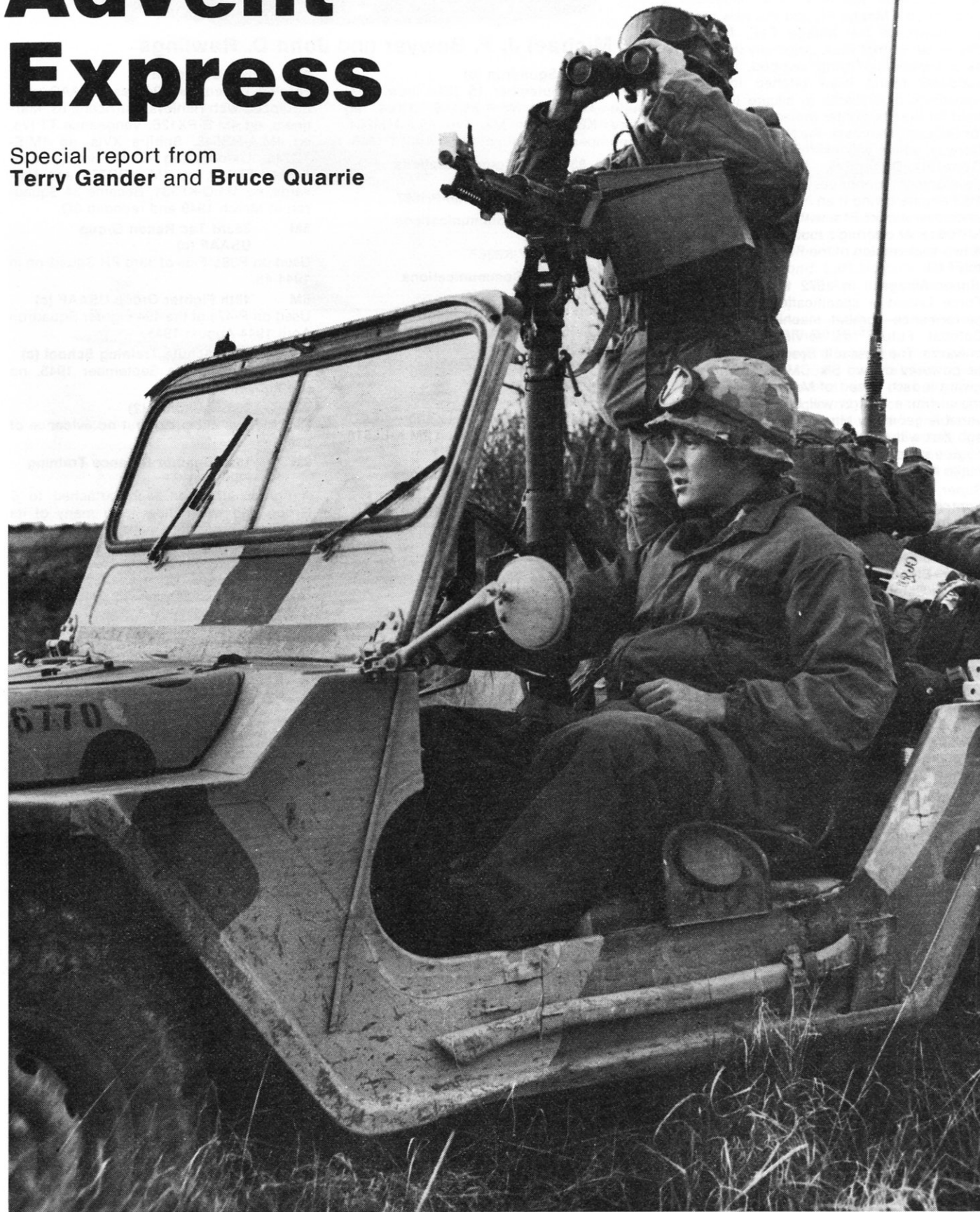
**Above** Spitfire Vb MX:R of the 307th Pursuit Squadron wears 1942-style RAF fighter camouflage and carries a small and indecipherable serial at the fin tip. **Below** Beaufort 1 MW:G-L4663 was delivered to the RAF on December 21 1939. It joined No 22 Squadron on January 10 1940 and went to No 217 on August 17 1940. It failed to return from operations on January 1 1941 (IWM).





# Exercise Advent Express

Special report from  
Terry Gander and Bruce Quarrie



FOR MANY YEARS now the hares and lapwings resident on Salisbury Plain have grown used to the sights and sounds of the British soldier marching, shooting and driving across the open spaces of Wiltshire. They had a distinct change during the end of November and the beginning of December, 1975, for during that time the Plain was the venue for Exercise Advent Express 1975. Advent Express was rather unusual for, although it took the usual form that most exercises take these days, the personnel taking part were a definite alteration. The participants all came from the Allied Command Europe Mobile Force (Land) or AMF, and included soldiers from America, Italy, Germany, Belgium and, of course, the UK.

The AMF is a formation specifically intended for combat at short notice anywhere in Europe, particularly on NATO's northern and southern flanks (Norway and Turkey), and all the units involved are air-portable. Advent Express was the first exercise that the AMF had held in the UK, and although it was described as a 'small scale joint (land and air) field training exercise', over 7,000 soldiers and airmen were involved. Being the host nation, the UK

**Facing page** American M151 Jeep mounting an M60 machine-gun on patrol during the exercise. **Above** 1:250,000 scale map of the exercise area, with the 'West Saxon' reserve zone and holding line on the left, main fighting area in the centre and the 'East Saxon' zone on the right bounded by the River Avon. To put you in the picture, Frome lies to the west, Andover to the east, Devizes to the north and Salisbury to the south. **Right** a Belgian para commando poses for the official camera. **Below** Infantry and a Chieftain of the East Saxon 'orange' force advance during the first day of the exercise (UKLF).







supplied the largest numbers of units and men, and took the part of the 'attacking' Orange forces of the 'East Saxons'. These forces were made up mainly of the paras of 16 Parachute Brigade, two squadrons from 4/7 Royal Dragoon Guards with Chieftains, and B Squadron of the Royal Tank Regiment with Foxes. Providing air cover were the Jaguars of 6 and 54 Squadrons, the Phantoms of 41 Squadron and Pumas from 33 Squadron. Hercules aircraft from 38 Group gave support.

The defending 'West Saxon' army (Blue force) was a much more polyglot outfit. On the ground the UK forces provided Scimitars from C Squadron of the Life Guards, the Queens Own Hussars provided one squadron (B) of Chieftains, the Royal Anglians supplied an entire battalion group, the Royal Artillery provided a headquarters unit for all the defending artillery and one battery (13 Light Battery) equipped with the 105 mm Light Gun. Other UK forces were from 30 Signal Regiment, a Logistic Support Battalion, a Movement Control Squadron from the RCT, an Intelligence Section and 38 Group acted as overall air support body to bring in more Hercules. Overhead came support (very close at times) from the Harriers of 1 Squadron, and the Wessex helicopters of 72 Squadron.

Belgium supplied a large number of men and units in the shape of a Para Commando Battalion Group complete with Scorpion and Scimitar tanks, an artillery battery using 105 mm M2A1s, and a squadron of Mirage Vs based at Yeovilton. Also at Yeovilton was a Fiat G91 squadron from West Germany that supported the UH-1D Hueys of LE Heersflieger Regiment 30. The Germans also supplied a field hospital. From Italy came a battery of 105/14 Pack Howitzers and an RF104 squadron. Americans seemed to be everywhere as they supplied the 1st Battalion (Airborne) 509 Infantry Battalion Combat Team, an HQ

company, an engineer company and a detachment of UH1Ds. Overhead they supplied some noisy Phantom air support.

With all these units spread across Salisbury Plain there was much to see but it was really surprising how the Plain could swallow up and hide all these units, their equipment and their manpower. The roads around the plain were thick with military traffic of all kinds, but once away from the roads and on to the Plain and all was quiet. In places camouflage netting could be seen when close to, but somewhere, those 7,000 men managed to conceal themselves very well.

The pattern of the exercise was planned to cover several days. The opening period was one of quiet patrolling along the borders, actually the River Avon. The Orange forces then attacked with a parachute landing and bridging of the Avon at dawn on Day 1. The Blue forces fell back in holding formations, held the attacking Orange forces, and then counter-attacked driving the enemy back to the border. That was how it was planned on paper, and how it actually worked out, but the weather then took hold.

December in Wiltshire is not the most clement time of the year, and the elements made themselves felt in no uncertain manner during Advent Express. It was cold, it rained and there was almost perpetual low cloud. A few fine spells enabled some of the planned para-drops, helicopter assaults and air support missions to take place, but the rest of the time, the infantry, gunners and drivers shivered in their foxholes and just got wet. Tank crossings and tracks became muddy nightmares and Land Rovers performed prodigious feats of cross-country travelling during their multitude of tasks during the exercise. Wherever one went, there was a Land Rover. Some carried Wombats, some had extensive radio fits, some just carried soldiers, but all

were extensively draped with sacking and netting, laden with sleeping bags and kit, and all were very muddy. The roads across the Plain were travelled by the heavier supply lorries of all the nations. Big Bedfords were followed by big Dodge and GMC trucks, all carrying fuel and heavy equipment. Light Mercedes lorries scurried about on numerous missions and the German VW and MAN ambulances went to and from the field hospital at Knook Camp. This fully-equipped hospital was kept quietly on the go throughout the exercise tending the sprains, cuts and burns inevitable during an exercise on the scale of Advent Express, and a helicopter landing pad outside was kept fully manned throughout the exercise.

By the time the attacking forces had been held on Day 4 and 5, the defending line was back around the ruined village of Imber and the artillery support was situated around Battlesbury Bowl. A visit to various infantry positions was a revelation in how modern infantry can go to ground in the open. Foxholes were scattered over a wide area and well concealed, although once under the concealment, one was confronted by a mass of bedding, weapons, tins, wrappings and all-sorts. A few days in the open on the Plain can do little for one's sense of well-being and this was particularly noticeable in the American position where four days on tinned food in the rain, plus being surrounded on one occasion by attacking British paras, did little to raise spirits. Add continual buzzing by Jaguars and Phantoms, and one can see why the Americans wished they were back in their base in Italy.

When the weather did allow, the airborne units undertook various tactical missions. The day began in the dark for everyone at about 0500 when a recce Phantom or RF104 carried out an infra-red recce to see where everyone was and make sure they were awake. Most aircraft carried a 'live'



load when they took off, made one dummy pass at their target, and then flew off to the Castlemartin ranges off South Wales to release their weapons. Gazelles, Sioux, Pumas and Hueys buzzed and chopped around almost constantly every day but the

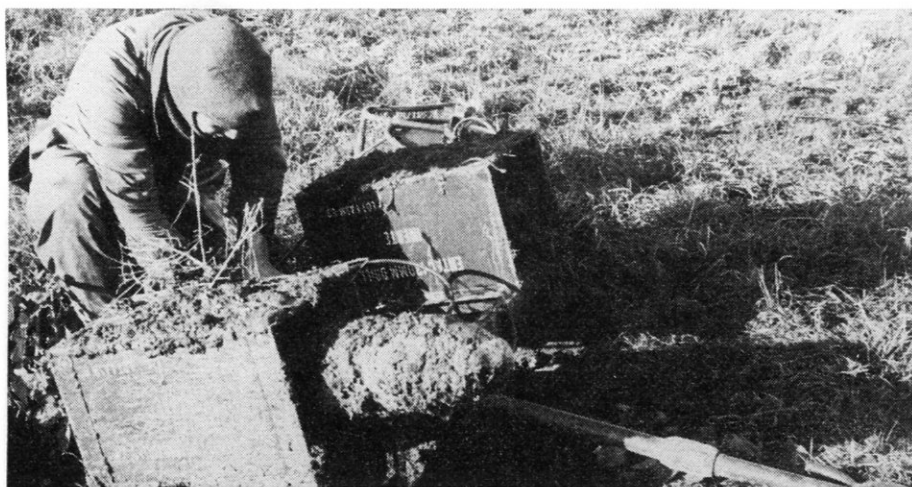
planned helicopter assault planned for the last stage of the exercise was called off by the weather. Instead a limited tactical lift of the Italian Pack Howitzers was carried out.

With so much to see and only a short time available, I couldn't possibly get

**Facing page** A stick of infantry prepare to board a Puma during the exercise. **Above** Invading 'East Saxons' with GPMG. **Below** Chieftains of the 4/7 Royal Dragoon Guards (all UKLF photos).







**Top** Preparing a Belgian Entac anti-tank missile — note camouflage finish is mud. **Above** M274 Mechanical Mules set off from Westdown Camp. **Below** Paras being carried into action on a Chieftain. As all the exercise units are air-transportable, they do not have FV 432 APCs, and thus grab lifts from whatever is passing.



around to see every unit taking part. But I managed to visit Chieftains and Scimitars in bivouac early one morning and see the cosy litter of Gaz stoves, tins and sleeping bags that cover such positions (all of it cleared up before the next move). The tanks were all hidden as carefully as possible and covered in sacking and netting to the extent that one Belgian Scimitar was almost invisible until one nearly fell into the culvert in which it was hidden. Belgian and Italian artillery positions were similarly concealed and both positions had machine-guns set up for local defence and individual weapons ready at hand for use if needed. No live ammunition was used during the exercise but there was extensive use of blanks and every infantry weapon was fitted with a blank-firing adaptor. A Belgian infantry position was well defended with Entac missiles and .50 Browning machine-guns carried up to position on the remarkable FN AS 24 Tricar run-arounds. The Americans had their M274 Mechanical Mule mobile platforms for a host of similar carrying tasks, and wherever there were Americans, the M151 Jeep was not very far away, many of them carrying TOW anti-tank missiles or M60 machine-guns.

On December 7, Advent Express came to an end. All the participants clambered thankfully out of their foxholes, hosed down their tanks and vehicles, cleaned their rifles, packed their gear, cursed the weather for the last time, and departed. Once more the Plain was returned to the hares and the lapwings — for a short time at least. □



TERRY GANDER'S comments on how well 7,000 men can hide themselves on Salisbury Plain are well borne out by the fact that I had driven right through the village of Tilshead — which, on the day in question, was right in the front line — before I saw a thing. The first intimation that something was going on was when a pair of Pumas came swooping round the crest of a hill and over the road, nearly causing the driver in front of me to swerve into the ditch!

Helicopters made a great impression during this exercise and it became vividly clear how deadly they can be in the tank-buster role when operating over suitable terrain. Salisbury Plain is not really hilly, but nevertheless helicopters flying right down on the deck could be practically on top of you before you spotted them, particularly when you were in a noisy vehicle like a tank or armoured car where your own engine drowned out the sound of their approach.

I'm a wargamer, as most readers of this magazine probably realise by now, and one of my main reasons for wanting to see Exercise Advent Express was to gain some real 'battleground' experience. You can read books and watch war films to saturation point, but until you've really seen how things work in the flesh, so to speak, you're still essentially working on a theoretical basis only. An exercise, of course, is not the same as real war — thank God! — but it still gives a vivid impression of what it could be like.

First of all, most of the time you can't see anything. And when you do, half the time you would already have been dead in a 'hot' situation. It is difficult to imagine the effectiveness of modern camouflage

methods — and even non-camouflaged vehicles are remarkably difficult to spot in the type of dull, misty weather which overlaid so much of the exercise. You wouldn't think, for example, that you could hide something as large as a Chieftain tank on top of a hill without elaborately digging it in — yet we got to within a quarter of a mile of a dozen of them sitting in a defensive circle within a small open wood before I realised there was anything there!

Camouflage is, of course, of only limited value in a real war situation, since ground radar and infra-red equipment is so efficient nowadays that the best concealed gun or vehicle can be spotted in short order. Nevertheless, camouflage does play an important role in confusing the issue — you might well be aware that there is some-

**Above** Moving an American M102 105 mm howitzer into action (UKLF). **Below** Belgian Scorpion and Scimitar.



thing sitting behind that hedge, but you'd have a hard job identifying it.

Smoke is another important factor. It's not a solid screen, as many wargamers seem to imagine. Rather, it's just like being in a thick mist, the visibility decreasing according to the density of the smoke being laid and the strength of the wind to disperse it. Once again, it doesn't really hide things — just makes them more elusive targets to identify or aim at.

People have been predicting the end of the Main Battle Tank for years, and during this exercise it became easy to see why. Tanks are very large, very expensive to manufacture and maintain — and very easy targets for infantrymen dug into foxholes with a couple of wire-guided anti-tank missiles. The American TOW system, for example, is capable of knocking out any tank in existence anywhere in the world at a range of up to 3,000 metres, and their crews are so trained and confident in their skills that they reckon on being able to knock out six targets before being eliminated themselves. An expensive exchange for someone. Of course, they rely on surprise and concealment, as well as speed of reloading and aiming, for their success, and there is still a great deal of comfort in the feel of a few inches of solid armour plate around you — but it does make you wonder whether the days of the MBT are numbered.

When we first adopted the Chieftain, for example, and then later the Scorpion family, I thought that British tank designers were falling into the old pre-war trap of using slow, heavily armoured vehicles in essentially an infantry support role, and light, inadequately armed and armoured ones in a reconnaissance role, but I'm becoming convinced that the Scorpion — and more especially the Scimitar variant with its 30 mm Rarden cannon — is the answer. They present smaller, faster-moving and more difficult targets for the infantry AT missiles; and using their fast-firing guns could probably eliminate their opponents long before they lost six of their own number. They are also cheaper and more economical to run than their big brothers.

Another piece of hardware whose days could be numbered is the traditional towed field gun. There were many of these in evidence during Exercise Advent Express, but after seeing how a couple of days' poor weather, coupled with the movement of hundreds of tracked and wheeled military vehicles, churned up the ground, one wonders how useful they would really be in any fluid war of movement today. Let us hope we never have to find out in earnest. □



# American Civil War figures

More 54 mm conversion ideas from  
Martin Windrow and Gerry Embleton

PICTORIAL REFERENCE is now widely available on this period, so we will not waste space describing in detail the finishing of this basic figure, which can be painted and varied in numerous ways. We suggest as the most helpful sources of ideas and information *The Army of the Potomac* and *The Army of Northern Virginia*, both by Philip Katcher in the Osprey Men-at-Arms series; and *Uniforms of the American Civil War* by Philip Haythornthwaite and Mike Chappell, recently published by Blandford.

Our basic figure, illustrated herewith completed and undercoated ready for painting, was made largely from Airfix 95th Rifleman and Imperial Guard Grenadier parts, with a few additions from putty, card, and the spares box. (The rifle is not shown; this will be added after painting). Take a Rifleman torso and stick the halves together. Trim off the collar, the outer rows of buttons, the rear hip buttons. Thin out the centre buttons to a total of four equally spaced from throat to waist, and file remainder down into conventional flat shape. Cut off rear of jacket level with bottom line of front.

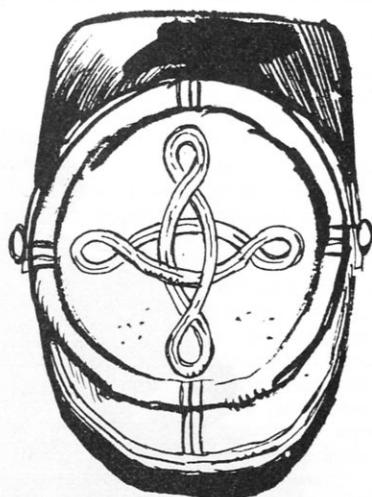
If your model is to depict a Confederate, or one of the several Union uniforms with round-bottomed jackets, stop now. If you want a Union infantryman, you have tunic skirts to add. Join the torso to the trousered legs from the Imperial Guard Grenadier, with suitable trimming and filing. If you want tunic skirts, add them now from either thin plastic card or paper, impregnated later with dissolved plastic, or doped. They have rounded front corners, reaching to roughly mid-thigh (length is not critical, given fitting standards of the day) and are otherwise plain. A fifth central button would appear just below the waist-belt; there are none on the cuffs of the plain sleeves, best selected from Airfix Afrika Korps sprues.

The collar for a round-bottomed Rebel jacket is low, standing, with rounded inner top corners. That for a Union five-button 'sack' is a small falling or 'rolled' collar. Either can be made from plastic card or impregnated paper: it is best to fit the head first. Any British Napoleonic head will do nicely. Now carve the trouser cuffs to simulate trouser bottoms tucked into woollen socks. Remove spat detail from the shoes; these are conventional laced brogans. The join of torso and pelvis is now covered with a plastic card waist-belt; if a Rebel, he would normally have a plain frame buckle (Historex spare) and if a Yankee, an oval US cypher buckle. We gave our Reb a bandolier over the left shoulder supporting a large plain ammunition box behind the right hip, held down by the waist-belt. A cap-pouch was cut down from a Rifleman's bullet pouch and added on the right front of the belt. A socket bayonet scabbard was worn on the left by both sides, usually on a simple slanted leather frog.

Rebel equipment was of both brown and black, and the details of pouch flaps,

buckles, etc., varied enormously. Union equipment was black. A circular brass plate was worn on the bandolier in the centre of the chest, with an eagle device. Cartridge pouches often had scooped flaps, and initially another oval U.S. plate on the centre. Union soldiers wore black tarred canvas haversacks, for which you can use Airfix Napoleonic items or carve your own from scrap or putty. These hung on the left, with a canteen, the latter usually on a white cotton strap. The canteens were oval in section, round in outline, and present quite a problem. One way out is to 'dome out' both sides of a Napoleonic British canteen from an Airfix kit with putty, filing into a regular shape when dry. Covers were usually grey, brown or blue felt. The wooden keg type was not unknown. With a Rebel your problems are less troublesome: many wore only a blanket roll, some carried haversacks of varied design but often captured Union items, and wooden canteens were common. The blanket roll was often rolled in an outer cover of black rubber-impregnated cloth with a slight sheen — the Union issue 'gum blanket'. The percussion rifle-muskets of the day can be simulated quite nicely by carefully hacking about at the lock of an Airfix French Napoleonic musket, using a photo as a guide — see *The Army of the Potomac* for a close-up of this.

Headgear is pretty simple. The kepi worn by both sides can be cut down from a 95th Rifles shako, or made from putty or scrap sprue on the basis of the shako peak and headband. For Rebs it was very often plain



Piping detail of officer's kepi. Piping was around top edge of dark blue band; up front, back and sides of yellow crown; and in knot insignia on top.

grey all over; officially it was sky blue on the crown and about halfway down the sides, with a dark blue band. For Yanks it was dark blue all over. Chinstrap and peak were black, buttons yellow. Yankee kepis can be enlivened by adding a Corps badge to the top of the crown. Examples which might appeal are a white Maltese Cross (2nd Division, V Corps); a forward-pointing bright blue crescent (3rd Division, XI Corps); or a red diamond (1st Division, VI Corps). These were introduced in spring 1863 by General 'Fighting Joe' Hooker. Slouch hats were almost universal in the Confederate Army. These can be of any detail shape and size and colour you like, and are simple to make. Apply a circle of thin plastic card to the top of the head for a brim, soften with liquid cement (carefully!) and bend to required shape, then build up a crown from putty or scrap carved to shape. You can model the famous 'Iron

Undercoated model of Confederate infantryman in short jacket and kepi. Occasionally these jackets — usually plain grey or fawn — were cut down from regulation frock coats, though these were rare. In such cases the jacket would be light or mid-grey, with collar and pointed cuffs of sky blue. Captured Union sky blue trousers were much worn.



Brigade' of Wisconsin and Indiana veterans in the Union Army in the same way. Give your Yank, instead of a kepi, a black Hardee hat; this would have a round, not very wide brim, probably worn flat or slightly rolled at the sides, with a round crown of rather high outline, and a stiff, flat top. The crown can be cut down from a 95th Rifles shako. A red disc on the front of the crown identified the Brigade as part of the 1st Division, I Corps, at Gettysburg.

Beyond saying that any number of buttons, every shade of grey and brown, and every stage of repair were to be seen among Rebel infantry throughout the war, we will not attempt to advise here on painting Confederates; for unit examples, see the source books quoted. Yanks wore dark blue jackets, sky blue trousers, and black shoes. Corporals and sergeants wore sky blue chevrons on both sides. A pleasant variation might be to simulate one of the Union coats made from cut-down pre-war dress frock-coats. For this effect, make the basic Union sack with these differences. Leave nine front central buttons between throat and waist, the bottom one visible below the belt. Give the jacket a low standing collar like the Reb round-bottomed jacket. Use, or simulate, arms with a pointed cuff, with two buttons on each, one above and one below the top line of the cuff on the rear seam. Add sky blue piping to the basically dark blue jacket — around the top, front and bottom of the collar, and around the top of the pointed cuff. A thought for the ambitious: many of the Negro troops received these cut-down jackets...

Another attractive variation on the Yankee is a soldier of the New York Ambulance Corps, attached to regiments from that state. Make the round-bottomed jacket with the low standing collar. Add Rifleman's shoulder straps. Add a second pair to each side of the body on the ribs, as the tabs which supported the belt — buttoned at the top, of course, and passing over the plastic card belt. Leave nine front buttons. Use arms with straight cuffs, or simulate them; there were two buttons on the rear seam of each, one above and one below the top line of the unpiped cuff. Add sky blue piping around top, bottom and front of collar; down the front join; round the shoulder straps and belt loops — long and buttoned ends only, not the butt ends. The kepi was dark blue but with a broad grass-green band around the bottom. Each man wore a broad green diagonal from front (low) to back (high) seam of the upper arm — about 'three fingers broad' in scale. Plain sky blue trousers were worn with the dark blue jacket. Such a figure suggests some suitable 'prop' instead of fighting equipment — a litter made from plastic rod or cocktail-stick wood poles with tissue canvas painted over with plastic 'soup'; a bucket from the Historex spares list; a bottle, or something of that kind.

## Confederate cavalry officer

For the more ambitious modeller, we close with a conversion from Historex parts suggested by the painting of the Reb cavalry lieutenant, reproduced on the cover of this magazine. We took the torso with a stable jacket closed at the throat and hanging open, and carved the bottom to simulate a waist sash worn over the shirt under the jacket. The bottom line was carved a bit under the right arm to suggest it was being



Confederate cavalry lieutenant. Civilian shirts were always worn, and you can select a pattern and colour to set off the grey of the jacket, the yellow of the facings and the crimson of the sash. We chose fawn and brown checks.

arms, et voila — Beauregard T. Butler, to the life.

We painted jacket and trousers light grey, with yellow collar and yellow pointed cuffs. Anyone who fancies his chances, and has cunningly selected arms which don't have dirty great creases across them, can try painting the gold 'chicken-guts' as well, but by no means all officers had them. Trousers, incidentally, could equally be very pale corduroy, an attractive effect if painted with very fine grey lines. Leather was black, scabbard silver, hilt gold, grip black, buckle plate gold, buttons gold. Rank badges in gold appear on the collar — one, two and three bars for Second and First Lieutenants and Captains; one, two and three stars for Majors, Lt-Colonels and Colonels. The kepi has a dark blue bottom band, yellow upper sides and crown, and gold piping, as in the sketch accompanying. Wide brimmed hats of all colours, including straw, were often worn, sometimes with feather or foxtail decorations to personal taste. An attractive variation would be the red of Horse Artillery replacing the yellow of cavalry. Imperial or full beards and moustaches were popular, and hair often hung to the collar. □



Michael J. F. Bowyer

# Army-air colours 1937-45

## Part 6 — The Blenheim serves again

THE DISASTROUS campaign in France had revealed the Lysander slow and vulnerable. Bad intelligence limited the effect of the Blenheim force in No 2 Group. Close support bombing was sparse and largely ineffective despite its cost.

German Stuka dive-bombers had meanwhile made an impressive impact upon the Army. From the soldiers came the cry 'Where are our dive-bombers?' The quick answer was 'Nowhere'. Suggestions that the Hawker Henley should serve were abandoned, mainly because money and production facilities were lacking. In any case the Air Staff were suspicious of such highly specialised aircraft, and saw the dive bomber in this light.

Once France was lost acrimony set in. Why was there no 'British Stuka'? Why had the dive bomber, seemingly such a potent weapon, been ignored? Parliamentarians and the Press clamoured for such a weapon, as if it could be drawn out of an aeronautical magic box. Behind the scenes those better informed suspected that against defended zones of the type that defeated the Lysanders and Blenheims dive bombers lost potency, and the Battle of Britain proved them right.

All the arguing could have little effect on the army co-operation squadrons stuck with the Lysander, an example of which flew experimentally with dive brakes — an idea not pursued.

Why, argued the War Office, could not the army co-operation squadrons operate with Blenheims for tactical bombing instead of Bomber Command. The Air Ministry answer was that No 2 Group had been specially assigned and trained as an anti-invasion force.

Then the Army persisted in its demands for a dive-bomber and eventually Air Ministry gave in. Specifications for a dive-bomber were drawn up, to which de Havil-

land among others responded with designs in appearance akin to the Ju 87. Specifications were also produced for army support bombers. None of these could be rapidly produced although there were suggestions for rapid development of the Henley, and even a militarised Percival Mew Gull with dive-bomber capability.

A better source of supply lay across the Atlantic where dive-bombers were available or under development. Initial experience with American aircraft had shocked the Air Ministry for none apart from the Boston seemed particularly battle worthy. When A&AEE tested the Boston they could suggest no particular role for it although the Army suggested it would be ideal for their needs. On paper two other American types looked likely to keep the Army quiet and happy — a Vultee dive-bomber which became the Vengeance, and the Brewster Bermuda. Promises were made that both would be available for army co-operation squadrons in 1941. What, though, could fill the gap until then other than the Lysanders?

Matters came to a head in December 1940 when the Command was inaugurated. The Air Ministry agreed that the Command could have some Blenheim IVs, reckoned to be the best support aircraft then available. Behind the scenes there was some misgiving. Blenheims were in great demand for Bomber and Coastal Commands and also overseas. A reversal of intent then came about. The Blenheim IV was said to be too slow for army support work, and lacked manoeuvrability at low levels. Training crews and fitting out the aircraft would make excessive demands. Instead the Lysander squadrons found themselves re-equipping with the Tomahawk, an aeroplane which Fighter Command felt unsuitable for offensive operations but which made an acceptable fighter-reconnaissance aeroplane. The Army was told that specialised bomber support aircraft would come, in the form of the Blenheim V (or Bisley), the Bermuda dive-bomber and the 'Beau Bomber' which evolved years later as

the Buckingham, unsuited then for any important task.

Partly to placate Army GHQ a new Flight, No 1416, began to form in March 1941, taking the place of Nos 53 and 59 Blenheim squadrons which lost their strategic reconnaissance duty on March 15 1941. The new Flight would supply the army with photo intelligence in the event of an invasion of Britain. Its first task was to photograph large areas of the country for the updating of maps and for general intelligence use, for which purpose it employed an assortment of Spitfires including L1000, R7142, R7139, X4784, etc, based at Hendon. On April 8 1941 the Air Ministry agreed to the Flight receiving four Blenheim IVs to increase its capability.

Still Army Co-operation Command persisted in its attempt to acquire a tactical bombing force. The Air Ministry insisted that Bomber Command retain the role and No 2 Group then began special training with the Army. The force of the cry was unsubdued, then on May 27 1941 it was made known that there were 'about 375 Blenheim IIIs in ASUs', and these could go immediately to the Command which needed 30 Blenheim IVs. Air Ministry replied that it could have the 'Mk IIIs' or nothing.

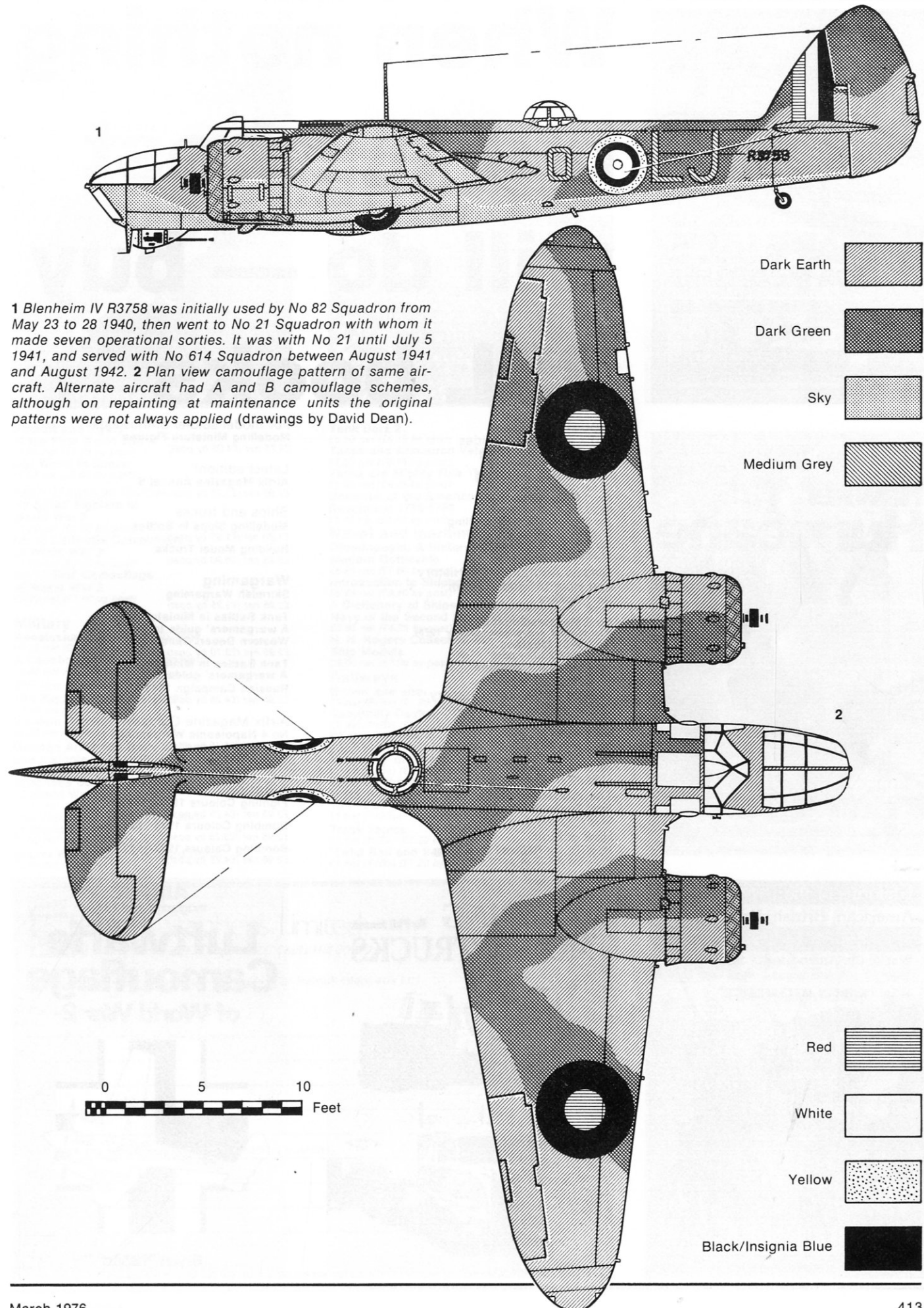
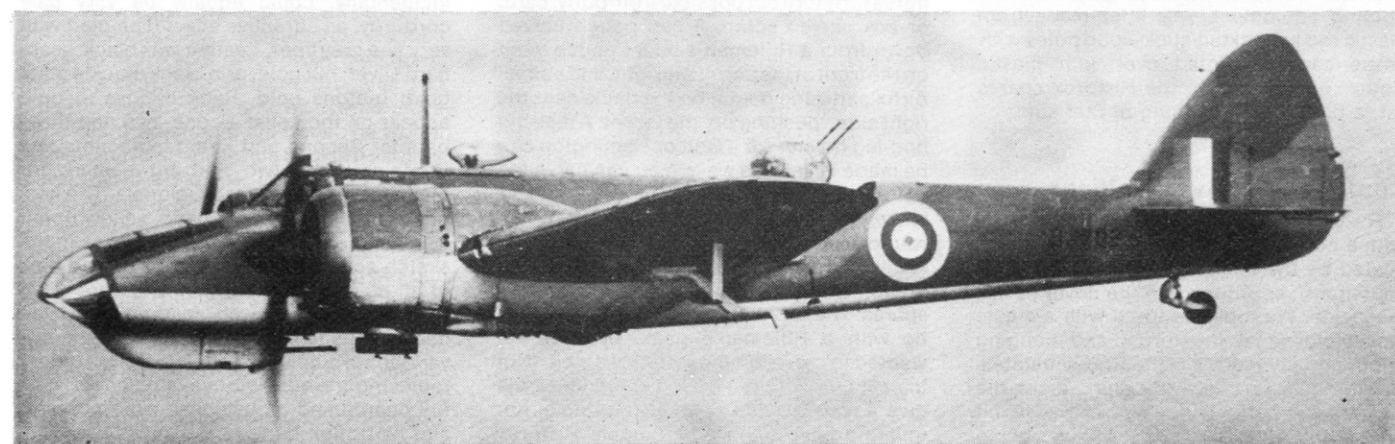
A census on June 16 revealed the aircraft in mind were tired and worn Blenheim 1s, 303 of which were available. Army Co-operation Command stood its ground — Mk IVs then or nothing. The Air Ministry advised it to await the Vengeance, 'faster, better armed and easier to maintain', and suggested three squadrons. Command replied that the aircraft was much delayed, turned down the Blenheim 1 as useless and finally the Air Ministry gave in. The Army could have its 30 Blenheim IVs, crews being trained at No 6 OTU Andover.

On July 14 1941 No 13 Squadron moved to Odiham and on the 19th received its first Blenheim IV. On July 26 the first Blenheim arrived at Macmerrey for No 614 Squadron.

By then the enemy had attacked the USSR, shelving his invasion plans for Britain. This left the Blenheim squadrons operationally purposeless. Command made good use of them giving the army some support training throughout the country. Blenheims were ideal for smoke laying using either SCL equipment or smoke bombs. A simple, effective and somewhat fear inspiring object was added beneath the nose of the Blenheims. It con-

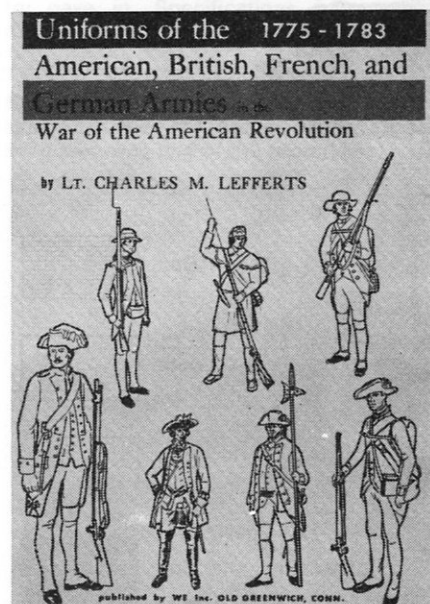
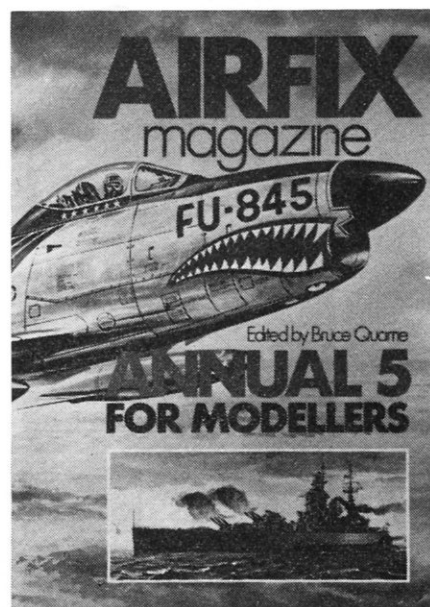
Continued on page 416

Briefly used by the army co-operation squadrons was the Blenheim VD. DJ702 seen here was one of the prototypes.



1 Blenheim IV R3758 was initially used by No 82 Squadron from May 23 to 28 1940, then went to No 21 Squadron with whom it made seven operational sorties. It was with No 21 until July 5 1941, and served with No 614 Squadron between August 1941 and August 1942. 2 Plan view camouflage pattern of same aircraft. Alternate aircraft had A and B camouflage schemes, although on repainting at maintenance units the original patterns were not always applied (drawings by David Dean).





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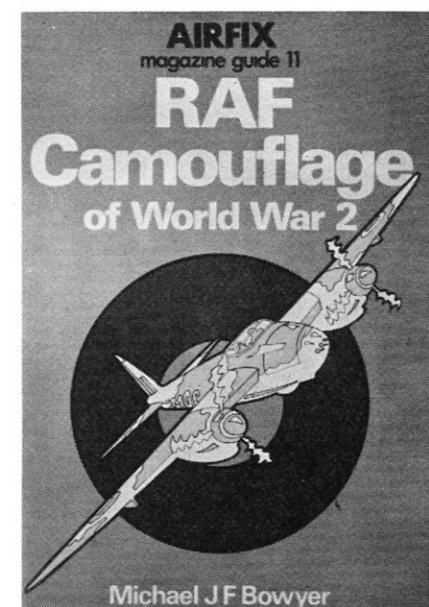
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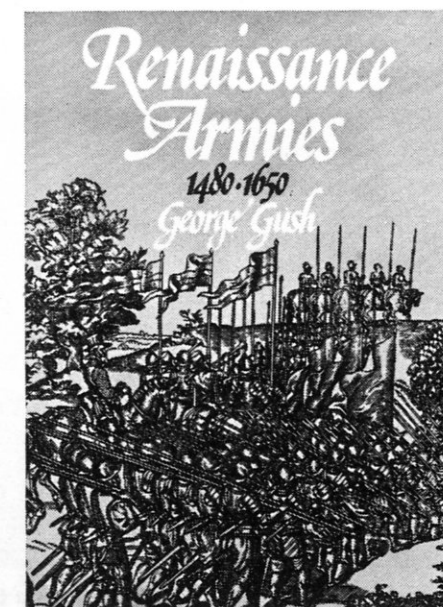
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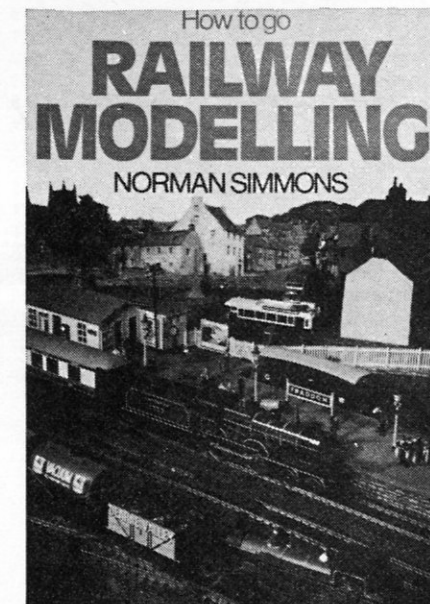
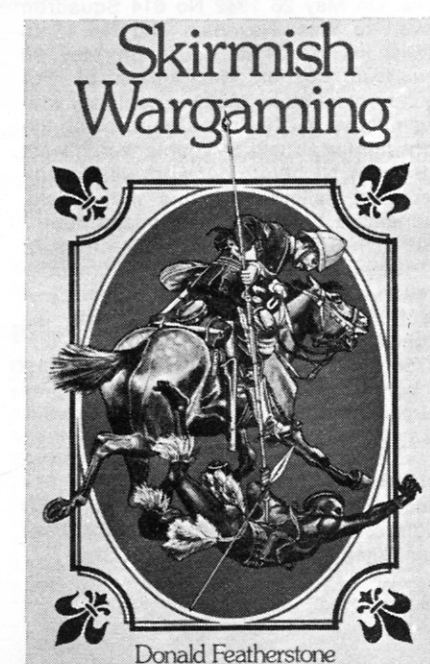
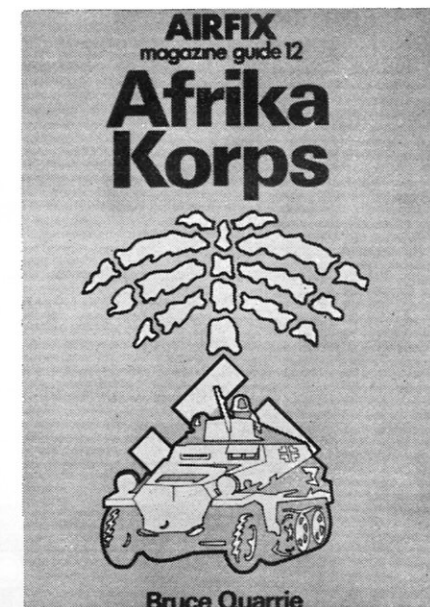
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A3/76



Continued from page 412

sisted of a device like a small turbine wheel. When turned on it produced an awful howl akin to that of the vaunted Stuka.

Meanwhile No 1416 Flight now at Benson prepared for Blenheim operations and on November 15 L9244 flew along the shore of the Cherbourg Peninsula as photographs were taken. The second operation was at night when photographs were taken with the aid of photoflash bombs, a type of operation undertaken periodically and experimentally until the final sortie on August 15 1942 when the last Blenheim sortie, this time in daylight and by L9244, was flown over the Channel.

The end of 1941 found the Blenheim really unsuitable for operations over Europe, but they soldiered on. Then a sudden unexpected requirement arose for involvement in 'Thousand Plan'. Bomber Command had decided to mount its 1,000 bomber raids and the two army co-operation squadrons would adopt intruder tasks. On May 26 1942 No 614 Squadron moved to West Raynham and No 13 to Wattisham. At 21.30 hours on May 30 Squadron Leader Macnamara of 614 Squadron set off in Z5882 in company with seven crews of 114 Squadron to bomb the night fighter airfield at Vechta, south-west of Bremen. Night intruder work was specialised and, failing to locate the airfield, Macnamara bombed the mainland south-west of Nordeney. Seven other crews of 614 Squadron led by Wing Commander Skelton were detailed to attack Twente. Flying N3536:LJ-A he failed to locate his target, but the other six (V5451:R, V5626:J, R3758:O, V5752:E, V5808:H and Z6173:H) all bombed. Twente was active and they claimed to attack at a crucial time with

A formation of Blenheim IVs of No 614 Squadron. The tail rudder striping on LJ:O is interesting for the photograph must have been taken in late 1941 (via R. Kirby).



Recently received was this photograph of a Blenheim 1, L1410 of No 18 Squadron, which crashed in Belgium on January 3 1940, and which was referred to in last month's feature.

night fighters in the circuit and flare path lit. R3758 was slightly damaged by flak.

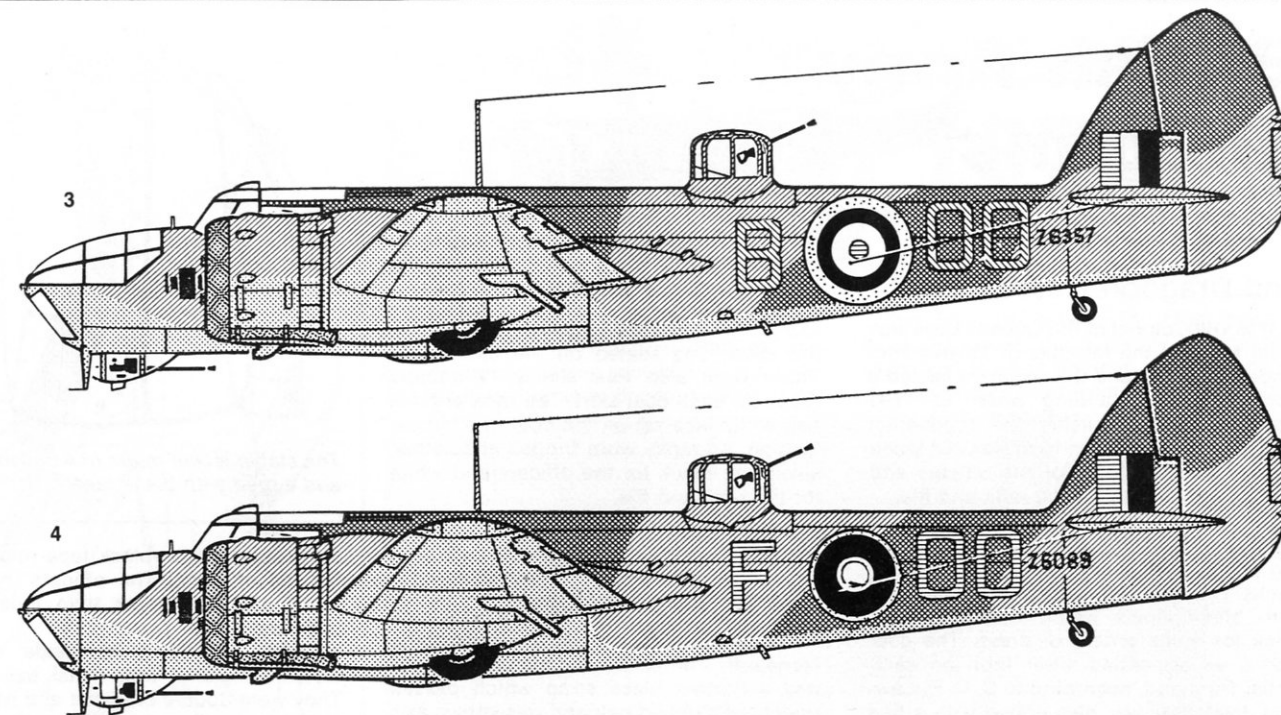
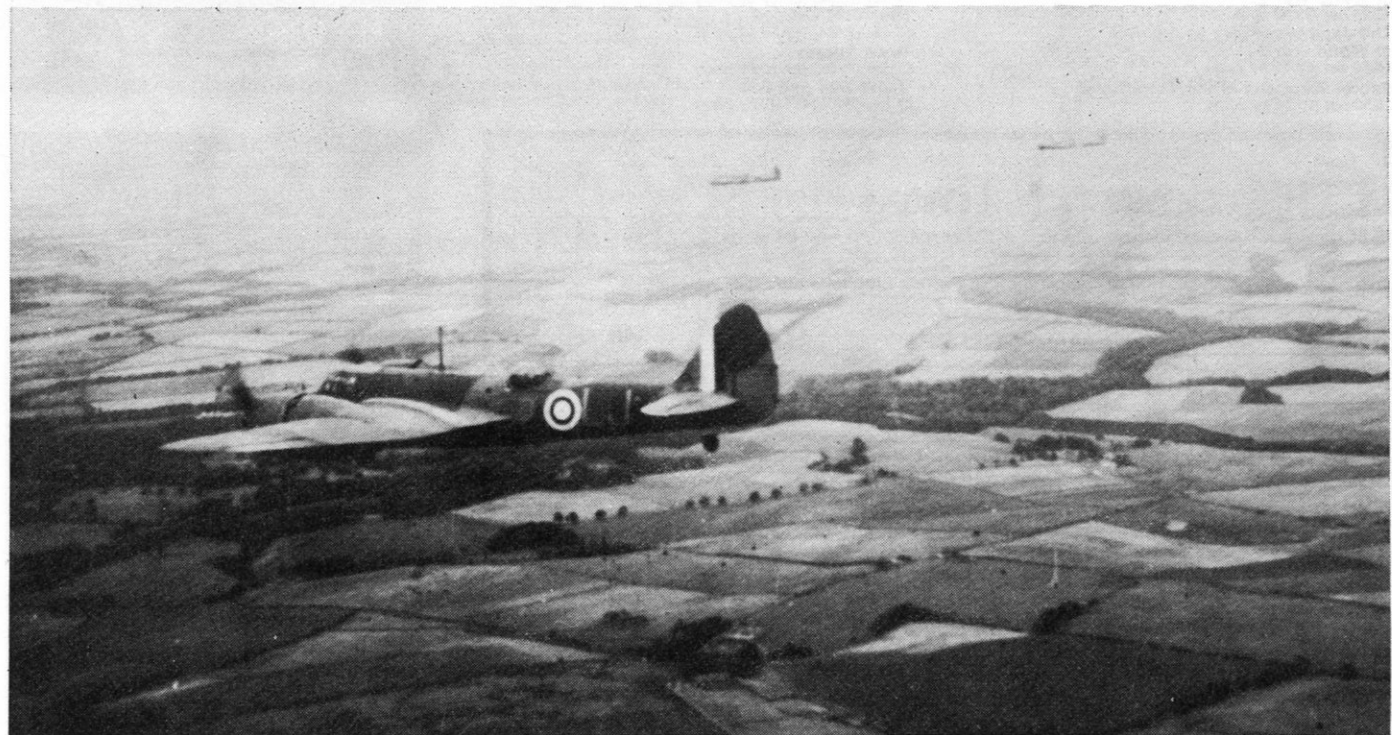
From Wattisham No 13 Squadron sent T2254:OO-I, N3545:K, N3616:R and Z6357:B to Juvincourt. Z6084:F and R3879:E attacked St Trond and Z5811:T Venlo.

During the operation against Essen on June 1/2 1942 both squadrons again operated, Z5882 going to Bonn airfield with 114 Squadron and the rest of 614 (N3536, V5451, V5626, V5752, V5808 and Z6173) went to Twente. Squadron Leader Macnamara attacked a Ju 88 on his mission to Bonn and three of the others bombed Twente. With them was Pilot Officer M. E. Porter in L1454:LJ-F, a Blenheim Mk 1 making that type's rare operational appearance over Europe. Caught in searchlights over Amsterdam, and meeting sustained flak, he decided to return at low level and abandon

his primary mission.

No 13 Squadron sent two aircraft to Venlo (Z6358:M and Z6186:E missing), three to St Trond (Z6084:F, Z6357:B, R3879:E) and N3545:K to Juvincourt and all attacked their targets. On these operations the Benheims had carried two 250 lb GP and two 250 lb 30 minute delay GP bombs with assortments of 40 and 9 lb bombs on light series carriers beneath the rear fuselage.

Blenheims of the two squadrons normally wore Dark Green and Dark Earth finish with Sky under surfaces — from personal observation the latter was seen to be a fairly deep shade very greenish in appearance. Squadron letters OO for 13 Squadron and LJ for No 614 were Medium Grey, unit letters placed aft. Fuselage serials were black. No roundels were carried on the under surfaces.



3 Z6357 was used by No 13 Squadron as OO:B, serving between July 1941 and June 1942 when it was written off in a flying accident. 4 Z6089 initially served with No 236 Squadron Coastal Command from July 6 1941, and joined No 13 in June 1942. It was written off as a result of battle damage sustained during the Dieppe raid of August 19 1942. Note the siren device beneath the nose (drawings by David Dean).

For their night operations the Benheims were given a quick matt black wash on their under surfaces and up their sides which was removed after they returned to their home stations on June 2/3 1942.

They were called upon again for the '1,000 bomber' raid on Bremen on June 25/26 1942. This time No 13 sent Z5811:P to Bremen along with Z5859:C, N6143:O, V6251:S and with Z6089 which did not attack the primary. N3545:K bombed Liege, Z6084:F (missing) and 'D' went to St Trond and T2254:I to Venlo from which it failed to return. Each took two 250 lb GP, two 250 lb LD 30 minutes and mixed 40 pounders. No 614 Squadron despatched V6078 to Leeuwarden with V5752, R3758:O, L1454 the Mk 1 and V6002:X. Z6173 and Z6104 went to Ardorf but neither attacked, although N3656 was successful. Vechta was the target for V5624, N3536, V5534 and V5808. Both squadrons, their aircraft again in a temporary night finish, had operated from Odiham from where 614 Squadron returned to Macmerry on July 2.

Soon afterwards the Benheims acquired Dull Red squadron letters and some aircraft were repainted Dark Green-Ocean Grey with Medium Sea Grey under surfaces. A few are known to have been Medium Sea Grey with Dark Green camouflage.

An intensive period of work-up followed, mainly smoke laying for another operation was to follow — the laying of smoke during the Dieppe raid. Planned for mid-July 1942, this occasioned 614 Squadron moving to Thruxton on July 14. Six days later, soon after final briefing the operation was postponed and the squadron retired to Macmerry. On July 27 the returned to Odiham, on the same day as they received their first Blenheim V.

The Dieppe raid took place on August 19.

No 13's task was to drop 100 lb phosphorus bombs on the landward side of anti-aircraft guns near Dieppe, to blind them from landing parties and aircraft as the smoke drifted. At 04.15 hrs Z6089, Z5811, V5380, Z5882, Z6558 and N3545 took off, bombed and then as they landed back V5380 was seen to be missing. At 11.00 hrs Z6358, Z5882 and N3612 attempted another smoke laying operation, but lack of fighter escort caused them to abort.

No 614 Squadron's task was to lay smoke. Wing Commander H. C. Sutton in V5534 was detailed to screen the landing forces. His No 2, V6002, lost formation but he proceeded alone. At 04.30 hrs Flight Lieutenant J. E. Scott left in V5625 to lay smoke but on the approach to the target area he was wounded by flak in both arms and in his left leg. He reached England safely but crash landed at Friston. His smoke bombs had hung up and the aircraft burst into flames on touching down bringing grievous casualties. Flying Officer J. G. Maclaren in V5808 and Flying Officer A. G. Hannah in T2288 also operated without streaming. V6032 and T2288 left at 07.40 hrs to lay more smoke but were soon recalled due to the absence of fighter support. Wing Commander Sutton led a third smoke laying operation at 10.50 hrs to cover the withdrawal of land forces. This time the force comprised V5534, V6078, Z6173, V6002, R3758, N3536, T2288 and V5808, all of which except T2288 laid smoke. Pilot Officer Smith streamed smoke from his SCI equipment.

Once the operation was over the squadrons switched to their re-equipment programme with the Blenheim VD with which they trained before proceeding to North Africa as bomber support squadrons in Operation Torch. No operations were flown from Britain using the Blenheim Vs with

which Army Co-operation Command was but briefly equipped.

### Bristol Blenheim IVs used by operational squadrons

**No 13 Squadron.** L4871 17.9.41 - 25.9.41, N3545 28.7.41 - 30.12.42, N3612 26.6.42 - 31.12.42, N3616 15.9.41 - missing 30/31.5.42, N3628 20.7.41 - 27.8.41, N6143 5.6.42 - 6.9.42, R3879 20.7.41 - 31.12.42, T1991 22.7.41 - 3.9.41, T2230 25.7.41 - burnt out 2.9.41, T2254 23.7.41 - to about 8.42, V5380 23.7.41 - missing 19.8.42, V6002 2.4.42 - 7.4.42, V6251 3.4.42 - 29.11.42, Z5811 1.5.42 - 6.9.42, Z5882 9.6.42 - 20.11.42, Z5986 13.8.42 - 5.1.43, Z6084 1.1.42 - 26.6.42, Z6089 2.6.42 - 19.8.42, Z6186 25.9.41 - missing 1/2.6.42, Z6340 31.7.41 - crashed 7.6.42, Z6357 30.7.41 - crashed 20.6.42, Z6358 31.7.42 - 8.9.42.

**No 614 Squadron.** L4822 16.7.41 - 18.9.42, N3536 6.12.41 - 18.9.42, N6143 22.4.42 - 5.6.42, R3758 1.8.41 - crashed 29.8.42, T1848 1.8.41 - 29.11.41, T2288 2.8.41 - 7.12.42, V5451 18.12.41 - 18.9.42, V5534 2.8.41 - 11.4.42 and 8.6.42 - 7.12.42, V5572 27.7.41 - 19.10.41 and 18.11.41 - 1.1.42, V5626 2.8.41 - 20.8.42 written off, V5690 2.8.41 - 8.12.41, V5752 24.1.42 - 18.9.42, V5808 4.3.42 - 8.9.42, V6002 7.4.42 - 25.9.42, V6078 29.12.41 - 30.10.42, Z5882 1.8.41 - 9.6.42, Z6104 5.1.42 - 25.9.42, Z6173 18.12.41 - 30.10.42. Mk 1 used L1454 7.8.41 11.8.42.

**No 1416 Flight/140 Squadron.** L4847 2.8.41 - 31.8.42, L6759 17.9.41 - 19.9.41, L9244 28.7.41 - 25.10.42, R3825 7.41 - 15.8.42, V5656 25.7.41 - 21.6.42, V6033 25.7.41 - 22.9.42, Z5805 25.7.41 - 10.10.42, Z5811 3.11.42 - 9.4.43, Z7360 13.9.42 - 31.3.43.

Blenheim training for army co-operation crews was initially undertaken by No 2 School of Army Co-operation which became No 6 OTU at Andover on May 31 1941. This unit trained mainly Coastal Command Blenheim crews and moved to Thornaby in July 1941 in which month a new OTU for army Blenheim crews opened as No 42 OTU at Andover. It moved to Ashbourne in August-September 1942 and re-equipped with Whitleys. □



# British Army uniforms

1660-1900

2nd Dragoon Guards circa 1795 by **Bryan Fosten**

IN 1795 THE Colonel of the Queens Bays was Field Marshal the Marquis of Townshend. Under his command the regiment issued a comprehensive standing order in 1795 which set out explicitly the regimental orders of dress. The uniform was red faced black with silver lace for the officers and white worsted lace for the rank and file.

The officers' regimental coat was made of fine scarlet cloth with black velvet standing collar, lapels, cuffs and white turn-backs. The coat was made double-breasted with black lapels which were buttoned back for some orders of dress. The coat had a square-ended silver loop on each collar front and, according to C. C. P. Lawson, the collar was also edged with a fine silver piping. On each lapel were ten square-ended silver loops and there were

four chevron shaped loops on each sleeve, the lower one seated on the black cuff. There were also four similar 'V'-shaped loops on each coat skirt. The rank and file had white lace set on the coat in a similar fashion. All ranks wore fringed epaulettes, silver and black for the officers and white for the rank and file.

The black cocked hats had silver trim for full dress and were worn with upright white, red rooted, feathers.

All hats were ordered to be worn well forward over the face so that the front cock came just over the left eye. The hats of the sergeants, trumpeters and the rank and file had a narrow black strap which passed under the clubbed hair and was known as a 'crupper'.

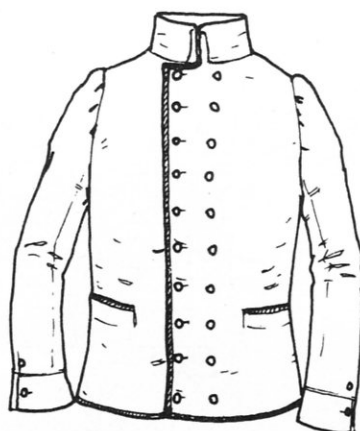
In quarters the officers wore their coats with the black lapels buttoned back and had plain black hats with feathers. With this dress they wore the regimental small sword, not the broadsword, on belts under the coats, and white breeches and black regimental boots. When in charge of the quarter-guard they wore the silver laced hat together with the sash, and the sword belt over the coat. When mounted they carried the broadsword and wore white leather or plush breeches and boots with spurs.

The officers' regimental greatcoat was dark blue, long, with a red collar and red coat edgings and had silver regimental buttons. These coats were double-breasted and had pockets in the skirts 'not on the sides'. When they wore the greatcoat on duty they wore the sash and the sword belt over it. The sword belt was retained by a small blue, red trimmed strap on the right shoulder. The sash was wound twice round the body and tied in front with the ends hanging halfway down the thigh.

When under arms on foot the rank and file were instructed to wear the uniform coat, white breeches and gaiters together with the swordbelt and a bayonet together with the pouch worn on a shoulder belt. They carried the firelock properly flinted but wore no gloves.

The so-called 'undressed' hat was plain

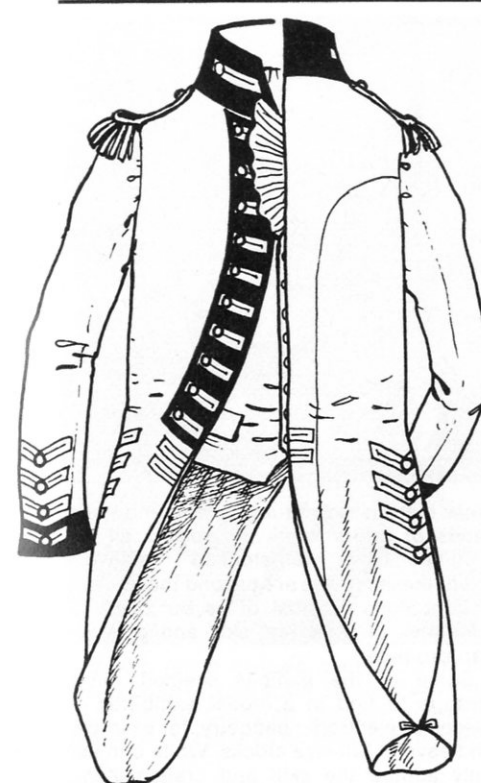
**Left** An officer in marching order wearing the broadsword on a belt over the coat together with the laced hat, feather and sash. An illustration in the British Military Library, 1799, shows an officer with rather short boots as in my reconstruction. The Standing Orders for the Regiment specifically state 'regimental pattern boots only are to be worn'. I do not know if the two are the same in appearance. In quarters the officer would wear the plain hat with the smallsword under the coat. If on guard duty the officer would appear as in the illustration but with the smallsword. **Right** A trooper in marching order.



The stable jacket made of woollen material and edged with black tape.

black bound with black tape (black velvet for the officers). The officers' hats were made slightly smaller than those of the rank and file.

Stable jackets were made of white woollen material with metal ball buttons. They were double breasted and had a high stand and fall collar. The cuffs had two buttons on the seam and the coats were edged with black. Those of the Farriers were blue with blue cuffs and collars with



The front and back of the regimental coat.

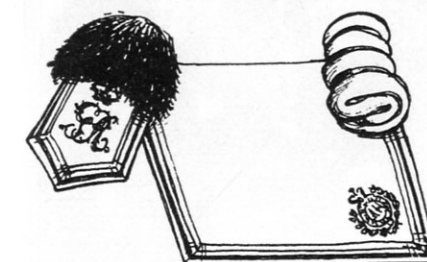
the same buttons and were also trimmed with black.

The watering cap was a black leather cylinder open at the top with a soft leather bag similar to a hussar cap. On the front was a small brass badge with Garter and Crown and a motto scroll lettered '2nd or Queens Dragoon Guards'.

On the march brown duck overalls with white metal buttons down the outside of each leg were worn. The Sergeants and the Trumpet Major had two black 'stripes' on the right sleeve; the Corporal one stripe; the Sergeant Major three and the Farrier two (in white lace).

The holster caps and the housing were white with one wide and one narrow black stripe. The device on the holster cap was the Royal Cypher and Crown in black, the device on the schabraque was the Crown over the Garter with the Queen's Cypher in the middle probably surrounded by a wreath, all in black for the rank and file. The officers had black velvet stripes with the devices in silver. Over the holster caps was a black bearskin flounce.

The horse furniture (from a book at Windsor dated 1794). The furniture is coloured buff in the illustration which could refer to the earlier facing colour of the regiment, meaning that the new horse furniture had not been taken into use at this date or that it just was not coloured in.



# Model Engineer Exhibition 1976

Report from this year's show by **Bruce Quarrie** with photographs by **Brian Monaghan**

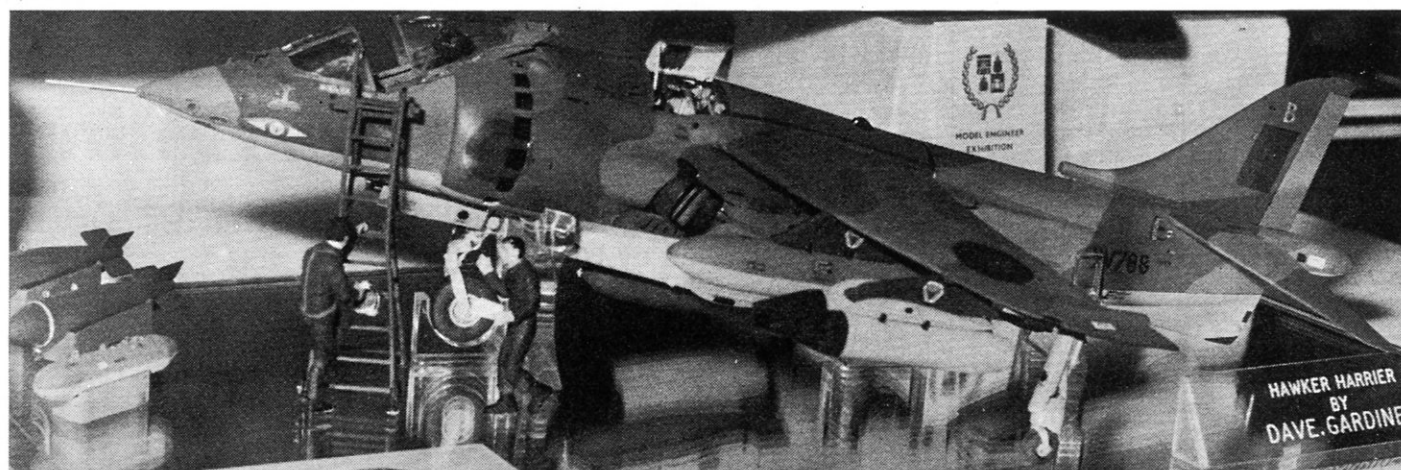
THIS YEAR'S Model Engineer Exhibition, held in London's Seymour Hall at the beginning of January, proved just as popular and inspiring as in previous years.

The main attractions for most people were, as usual, the superbly engineered locos and traction engines, etc — working models constructed from wood, brass and



Silver medal winner in the working yachts and sailing ships class was this beautiful Stuart yacht of 1661 in 1:24 scale by J. Blight of Croydon.

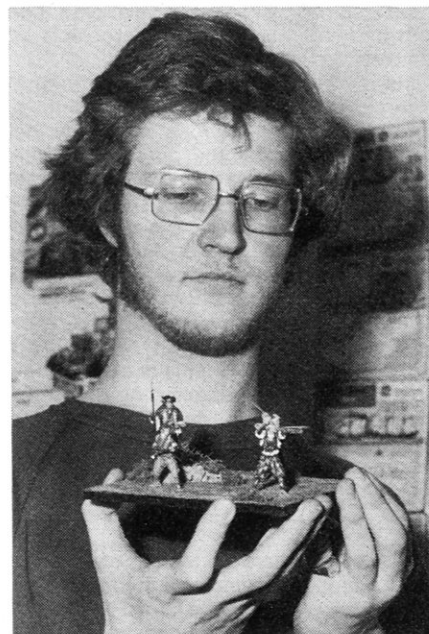




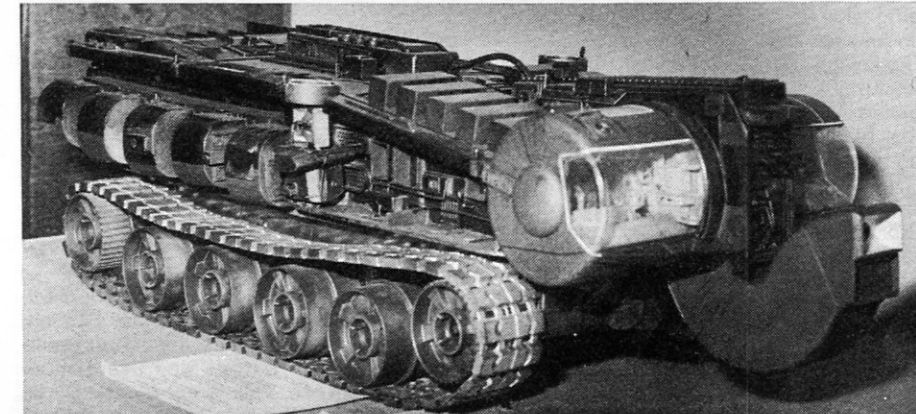
other materials. Frequently requiring thousands of hours' work as well as all the facilities of a well-stocked metalwork shop, these models are beyond the abilities or ambitions of most of us but serve as examples of what real skill and patience can produce.

Some of the exhibits seemed rather strange to find in a model exhibition — pieces of electronic gadgetry, for example, and several full-size clocks. While one can only admire the skill and craftsmanship which goes into most of these, one would hardly have thought that they qualified as models. This becomes particularly relevant when you think about the display area devoted to the exhibits: in many instances these were crammed so tightly into their

**Top** Dave Gardiner's award-winning 1:24 scale Airfix Harrier, which attracted many admiring glances. **Left** One of the major attractions for children was the working miniature railway put up by the Society of Model Experimental Engineers. **Below left** 'Now where did I put those grenadiers' — organised chaos on the Hinchliffe stand kept Pete Gilder (left), Frank (centre) and John Hinchliffe busy all week. **Below** It was much the same on the Historex stand where Lyn Sangster (wearing tie) was also doing a roaring trade.



Tamiya's latest venture should be in the shops soon — 1:35 scale Samurai warriors. Here Alistair Cameron displays a painted group of four figures on the Seagull stand.



**Top** Napoleonic wargaming in the gallery, using mainly Airfix 00/HO figures. **Centre** Free-lance design tracked lunar vehicle built for use in an amateur science fiction film. **Bottom** Very attractive large-scale model of the CA Class destroyer HMS Cavendish.

forget that over half the people who visit this type of show are children — there was plenty to watch and do, ranging from taking a ride on the miniature steam loco down the length of the hall to watching the radio-controlled boats in the pool, the round-the-pole flying model aircraft or the

wargames in the gallery. Congratulations to the organisers on putting on such an interesting show — but perhaps a little more thought to the comfort of your visitors and to the proper display of the models next year would make it even better.

display cases that little detail was visible; while in others delicate and practically priceless models were completely unprotected and vulnerable to thousands of prying little fingers. Perhaps — particularly in view of the dense crowds which this exhibition attracts and the lack of space in the gangways between the stalls and exhibits — it is becoming time for the organisers to either start being more selective in the entries, and types of entry, displayed; or alternatively find larger premises. It's a bit much to queue for three-quarters of an hour to get in, then find the hall so crowded that you can't get close enough to the exhibits to see them properly half the time!

Complaints over, it has to be admitted that the standard of entries is definitely improving year by year, and on the plastic modelling side there were many exhibits this time which would not have been out of place in an IPMS, MAFVA or BMSS National championship (in fact, I think some of them had been). With such a diversity of models depicting practically every subject under the sun, in such a variety of scales and materials, it is virtually impossible to pick favourites, but ones which particularly caught our eye were Dave Gardiner's superb 1:24 scale Airfix Harrier and Tony Woollett's three lovely scratch-built Tiger Moths.

The trade were out in force as usual and the model figure manufacturers, such as Hinchliffe and Historex in particular, were rushed off their feet all week. Miniature Figurines and Seagull Models were also doing brisk business, and the British Model Soldier Society stand — tucked away in one of the slightly quieter back rooms where you could actually get a good look at the models — was a most attractive stopping point. Many other modelling clubs were also represented, including the IPMS, and the exhibition was a good place to see examples of members' work.

For children — and one must never



# NEW KITS AND MODELS

## Matchbox Wellington

THE EVERGREEN Wimpey has always been a popular World War 2 subject and it is surprising therefore that Airfix have had a monopoly in 1:72 scale for so long. However, in one deft move Lesney have increased by 100 per cent the choice available to those who hanker after a Wellington for their bomber collections, and in so doing have almost certainly got themselves a money spinner.

Following the now familiar pattern of Matchbox kits this one is moulded in three colours which is of little consequence to most readers of this magazine so it won't be mentioned again.

One very noticeable achievement by the design team, backed of course by the mould makers, is the superb simulation of the fabric covered Geodetic construction. At first glance this does appear to have been overdone, but this impression soon disappears once the model is painted, when it really does capture the look of the real aeroplane.

It goes without saying that the standard of moulding is high and there are absolutely no problems with fit of components. One vital action that must not be missed is the painting of the internal structure on the fuselage windows before the halves are joined together, after that there is no chance so it will be back to basics for those who forget.

Dimensionally the model is accurate but a watch must be kept on the dihedral during assembly and the props look to be a wee bit on the narrow side.

A bonus is the optional nose section for the GR XIV — a conversion that was done some time ago in *Airfix Magazine* — and happily this fits well if care is taken to follow the clear instructions.

Decals are provided for three versions, a Mk X of No 428 'Ghost' Squadron, the same mark for No 300 (Polish) Squadron and a Mk XIV of 179 Squadron Coastal Command. By combining parts, props, tailplanes, from the Airfix kit, replacing the guns with scratch-built ones, and adding extra detail, a Wellington par excellence will result.

## Matchbox He 115

THE SECOND of the simultaneously released quartet of Red series kits from Matchbox is unique on several counts. It is the first time this model has appeared in 1:72 scale, it is one of the few kits of float-planes available, and it has absolutely none of the familiar Matchbox trench works, admittedly there are panel lines and control surface details but these are not by any means as objectionable — to the serious modeller — as those one has come to expect as the Lesney trademark.

The He 115 was probably the most extensively used aircraft of its type in World War

2 and engenders nostalgia that always seems to be just below the surface when such aircraft are discussed. Maybe this is because we British are basically a seafaring race, or alternatively it might be because there ain't no wheels to paint!

Transparencies are good and vast which means that cockpit detailing is a must unless you want to end up with a model that looks like a greenhouse just after harvesting. Having detailed the crew's comforts, access is gained by two very delicate entry ladders which come very close to being perfect as far as scale size is concerned.

On the debit side the support struts for the floats, as modelled would have knocked a lot off the aircraft's forward speed, so must be given aerodynamic refinement that Lesney seem to have overlooked.

Decals for three versions are supplied, two being German and the other Finnish, but it is best to disregard the colour rendition of the box artwork and use a more accurate source. This is not a criticism as colour printing if it is to be spot on is very expensive and it is better to have a good model in a poor box than vice versa.

## Matchbox He-111H

THE He 111 is probably one of the most well-known Luftwaffe bombers of World War 2, and although usually associated with the Battle of Britain it did in fact see legion service in almost every theatre and was still soldiering on in 1945.

Lesney have joined the ranks of Frog and Airfix in adding their 1:72 scale interpretation of this popular subject to their growing range and have done a first-class job. Overall accuracy is good but once again there are signs of penny pinching, it may well be £ pinching as far as production is concerned, but reviewers must look at their subject from a modelling point of view rather than a cost effective one.

The above comment is particularly noticeable in the under fuselage gondola where the side windows are moulded and transparencies are not supplied, this being the same technique as was used for some windows in the same company's Ju 88. To put this error right is not easy and one cannot help feeling that a separate complete transparent gondola added after and painted accordingly might not have been better if this had been possible within the budget.

Having thrown one stone, a bouquet would appear to be in order, and is earned in respect of the rather peculiar offset shaped nose cone that characterised the He 111. By using three mouldings this has been achieved most effectively.

The large cockpit transparency leaves the bare inside open for critical comment if this area is not attended to and there is so

much material available on this aircraft that even the tyro should have no problems in this respect.

The complex and delicate looking undercarriage is reproduced well and is very sturdy despite its looks. Turning to the top of the fuselage, the gunner's cupola looks to be a little on the wide side in plan view but is correct in depth. The wing surfaces have scribed lines on them which are not as deep as is usual on Matchbox kits, but the heavyweight scribe was certainly used on the fuselage.

Decals for two Luftwaffe aircraft, one of Kg55 and the other of KG 51, are supplied and the third choice on this occasion goes to Grupul 5 of the Rumanian Air Force, an unusual but very colourful choice.

A good kit of a popular subject that will restore many a miniature Luftwaffe's strike potential.

## 1:32 scale F-104C

AL TRENDLE of MiniCraft Models of America kindly supplied a sample of the latest 1:32 scale jet to come from the famed Hasegawa moulds, which should by now be available in this country.

Some critics of reviewers deprecate the use of adjectives like 'superb' and 'excellent', but what else is there that can be said about a kit that really does live up to such accolades?

The 125 parts that go into the make-up of this still futuristic looking aircraft are living testimonies to the skills of those responsible and it is a pleasure to work with such components. Every part clicks together just as it should and with only the merest attention to additional detail, an exhibition quality (another hated phrase) results.

Construction follows similar lines to that of the same scale F-86 from the same stable and starts with the cockpit interior which comprises no fewer than 14 parts, including one of the best ejector seats yet seen on a model. The instruction sheet details each part and its correct colour during every assembly step and it is recommended that it is followed implicitly.

The General Electric J 79-GE-3B Turbojet engine is supplied and can be viewed by removing the rear fuselage as in the actual aircraft. This joint can be a little troublesome so many modellers will no doubt prefer to cement the removable tail section in place. But those who build dioramas will love this feature as well as the completely detailed nose radar under the removable nose cone.

The extremely thin section wings with their pronounced anhedral simply cry out for the addition of the protective pads seen on the real aircraft's leading edges and the fuselage dive brakes also open to show the interior detail; another two bonuses for the scenic modeller.

The undercarriage has a pre-formed wire insert to give it strength, and the wheels, which are all moulded in plastic unlike the F-86 which had rubber tyres, are 100 per cent accurate.

The cannons are very fine mouldings and have removable covers and the cockpit transparencies couldn't be better.

Markings on the review sample were for the aircraft of Colonel George C. Laven and are extremely colourful, but it is likely that

# MODELLTWOYS

PLASTIC KIT SPECIALISTS — ASSOCIATE MEMBER I.P.M.S.

## HASEGAWA A/C KITS

Lockheed T-33A	1/72	40p
Curtiss SO C-3 Seagull	1/72	40p
N.A. F-86F Sabre	1/72	40p
Heinkel HE-51 A-1	1/72	40p
F-5A Freedom Fighter	1/72	40p
T38A (F-5B) Talon	1/72	40p
ABM3 Mod 22 Zero	1/72	50p
ABM3 Mod 32 Zero	1/72	50p
Heinkel HE 51 B-2	1/72	50p
C. Seagull floatplane	1/72	50p
Cessna A-37A	1/72	50p
Bell UH-1D Iroquois	1/72	50p
MIG-17E/D 'Fresco'	1/72	50p
P-47D Razorback	1/72	50p
P-47D Bubbletop	1/72	50p
S. Spitfire Mk. I	1/72	50p
P-51D Mustang	1/72	50p
Ki-44 Shoki (Tojo)	1/72	50p
Ki-61 Hien (Tony)	1/72	50p
FW 190A-5/7	1/72	50p
FW 190D-9	1/72	50p
H.S. Harrier Mk. I	1/72	50p
BAC Lightning 6	1/72	50p
Alchi E 13A 'Jake'	1/72	60p
T-34A Mentor	1/72	60p
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G.O.V. IB Mohawk	1/72	60p
G.O.V. IA Mohawk	1/72	60p
A-4E/F Skyhawk	1/72	60p
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ABM2 Zero	1/72	65p
ABM3 Zero	1/72	65p
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Boeing F4B-4	1/72	1.35
ABM2/3/5 Zero	1/72	1.35
Curtiss B2C-1	1/72	1.35
ME 163 Komet	1/72	1.35
FW Bf-109E	1/72	1.35
M. W. 90A	1/72	1.50
P-51D Mustang	1/72	1.50
P-26A Peashooter	1/72	1.78
ME 262A	1/72	1.95
N. Ki-43 Oscar	1/72	2.75
LF-104 GJ	1/72	2.95
N. F-86F Sabre	1/72	3.25

## HELLER A/C KITS

Polkarpov 1-153	1/72	55p
Yak-3	1/72	55p
ME Bf109E-3	1/72	55p
ME 262B-1a/U1	1/72	55p
FW 190A-8/F-3	1/72	55p
P-47N Thunderbolt	1/72	55p
Bloch 152	1/72	55p
Dewoitine D-520	1/72	55p
Caudron 714	1/72	55p
Les Mureaux 117	1/72	55p
Morane M.S. 230	1/72	55p
Morane M.S. 406	1/72	55p
Brequet 693	1/72	55p
Bloch 174	1/72	55p
Amiot 143	1/72	55p
Bloch 210	1/72	55p
Potez 540	1/72	55p

## L.S. A/C KITS

Peggy Heavy Bomber	1/72	1.40
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Ki-109 Exp. Fighter	1/72	1.40
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M. G3M3 'Nell'	1/72	95p
M. Civil 'Nell'	1/72	95p

## FUJIMI A/C KIT

G.E.-2A Hawkeye	1/72	1.63
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M. Ki-21 Sally	1/72	£2.70
N. J1N1-S Gekko	1/72	£2.70

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Ki-44 Shoki (Tojo)	1/72	60p
Ki-84 Hayate (Frank)	1/72	60p
ASMA Mod. 32 Zero	1/72	60p

## MONOGRAF A/C KITS

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Curtiss F11C-2 biplane	1/72	65p
Boeing F4B-4 biplane	1/72	65p
Curtiss P-36A	1/72	65p
G. F8F Bearcat	1/72	65p
P-51B Mustang	1/72	65p
D. Alie Skyraider	1/72	85p
Me Bf 110E	1/72	85p
G. F-7F Tigercat	1/72	85p
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F-82G 17m Mustang	1/72	1.25
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P51A Mustang II	1/72
Fokker D.21	1/72
Heinkel HE.162	1/72
TA 152	1/72
ME.109F	1/72



Continued from page 422

these will be replaced by alternatives on the models distributed in England.

No price was available at the time this review was written but it is sure to be competitive and a worthwhile investment for all 1:32 scale jet nuts.

# Nitto Sherman

KITS OF THE cast hull M4A1 Sherman are few and far between so this one from Nitto in 1:76 scale should prove popular. The Sherman actually contains some internal detail, eg turret basket, gun breech, ammunition, etc, but this is of doubtful advantage unless you intend making a cutaway model as the instruction sheet (in Japanese in the review kit) illustration suggests. Which leads us to one or two anomalies as the engine parts are presumably meant to represent a 'V' 8 engine whereas the M4A1 was fitted with a Continental Radial. Road wheels are neatly 'spoked' which is probably correct though some were fitted with 'solid' wheels and it is a point not always easy to verify from photographs. Generally a neatly moulded kit which would make a good basis for conversions to, say a 'Screaming Mini' or the 76 mm armed version.

# Matchbox F-4M/K

IT WAS INEVITABLE that Lesney had to add a Phantom to their inventory and thankfully they used some thought and came up with the versions used by the RAF and RN. This model is akin to the curate's egg; good in places. The underwing and fuselage stores will make the mouths of even the most critical water, but at the same time their eyes might have already suffered from a similar flood if they have already looked at the nose contours. From just aft of the cockpit to the nose something seems to have gone sadly amiss. The radome is incorrect in shape and diameter and the fuselage just does not look to be deep enough around the cockpit area. The canopies are moulded separately in three sections, so that they can be open to show the good interior detail, but this has meant the omission of the small window in the moulded arch between the two crew positions. One answer is to mould a complete new canopy based on the Hasegawa kit, but apart from an extensive rebuild there is very little that can be done about the rest of the nose area.

The characteristic wing root bulges to accommodate the wider wheel used on this version are accurately reproduced, and the two different types of tailplane are also supplied, the extended nose oleo of the RN versions completes the thought that has gone into this model. In addition to the stores there are also a couple of crew entry ladders which will be invaluable to those who like incorporating their models into dioramas.

Markings for two RAF aircraft, No 6 and No 41 Squadrons are supplied, and the RN is represented by No 892 Squadron complete with the striking Omega tail marking. All in all a good kit with perhaps too many deep 'Lesney Lines' but well worth the price just for the extras, and a good model if its suspect shape doesn't put your nose out too much!

# NEWS FOR WARGAMERS

## Fast Carriers

THIS GAME, from Simulations Publications Inc, endeavours to capture the flavour of aircraft carrier warfare during World War 2, through Korea and Vietnam and up to the present day. 800 die-cut, cardboard counters have been provided to depict individual American, British, Japanese and Russian ships and carrier-borne and land-based aircraft (each counter representing six aircraft).

*Fast Carriers* is played on three levels; strategic, operational and tactical. Strategic movement takes place on one of five strategic maps (printed on a single sheet) using markers to indicate naval task forces. Each strategic turn represents four hours of real time, with six turns being one complete day. Operational tasks take place off the map on special display cards, one for each task force and land base. The displays are concealed from opposing players and show the individual ships making up a task force, and the state of readiness and location of all aircraft with the task force. Aircraft may be in the hangar, arming and refuelling, or on the flight deck ready for take off. When launched they can be directed on search procedures to locate enemy task forces, on strikes against located enemy TF's, or maintained on Combat Air Patrol to defend against enemy strikes.

There are four operational turns per strategic turn, so each operational turn represents one hour of real time during which the operational tasks are plotted. These operational stages are the most crucial of the entire game. Players have to plan the number of aircraft searching for the enemy, where they will search and in what search pattern, which aircraft will be on CAP, how many aircraft will be employed on a strike, whether they will have fighter cover, when they must return to base (endurance varies for different aircraft types) and how many strike waves they will attack in.

Searching for enemy TF's is frustrated by the use of dummy markers and by a chart and dice method of determining whether a TF is sighted by searching aircraft. The chart computes the probability of a sighting giving consideration to range, search pattern and the number of aircraft employed. Even if a TF is sighted there is a procedure whereby the sighting aircraft may return with a misleading or totally false report.

Of course, these procedures apply only to the World War 2 scenarios. After World War 2 it is assumed that the exact location and composition of an enemy force is

always known because of modern tracking systems. In fact *Fast Carriers* is really two games with quite different rules applying to the age of jet propulsion and black boxes.

Having located an enemy TF and launched a strike, the attacking player must keep mental track of the location of the strike force as it proceeds on its way to the target. No markers are used on the strategic maps to warn an opponent of incoming strikes or their points of origin. After the strike the attacking player must similarly plot a course back to base for his aircraft (it seems a good idea to keep a log for each task force to keep track of all operational moves).

To conduct a strike the players progress to the tactical stage, and a tactical map for this is printed on the same sheet as the strategic maps. The defending player transfers the ship counters from his display cards to the tactical map. The attacking player determines by means of charts and dice throws which strike waves make contact with the enemy and in what order they attack. There are different procedures for fighters, torpedo bombers, dive bombers and level bombers. Each wave of the strike is permitted to attempt its attack through six tactical turns, each representing 40 seconds of real time. After the sixth tactical turn the wave moves away from the attack while the next wave comes on.

During the tactical stage the attackers are subjected to the ravages of flak and defending aircraft on CAP. Mishandling of a strike will result in very heavy aircraft losses by the attacker. It is no use relying on a lucky hit by a single aircraft. The secret seems to be to hit hard and heavy, with enough aircraft to overwhelm the defences, even if several waves go astray (and they will!). Even this is not going to guarantee success. The planning and execution of such a strike is no mean feat. Naturally, the game concentrates on the air warfare aspects, but there is an abstract and not very satisfactory procedure for dealing with surface combat between task forces if it should occur.

Other rules deal with night turns, weather, pack ice, submarines, oilers (for the destroyer escorts which need refuelling every three days) and for damage repair to land bases. *Fast Carriers* is an excellent simulation of the organisational planning required for successful carrier warfare, and should have strong appeal for those who enjoy games demanding forethought and a clear, methodical mind. Muddled thinkers won't stand a chance! Available from Simulations Publications UK, Crown Passages, Hale, Altrincham, Cheshire WA15 9SP, price £5.45 plus postage.



# BOOKS FOR MODELLERS

## Aviation

**Military Aircraft of the World**, by John W. R. Taylor and Gordon Swanborough. Ian Allan Ltd, Terminal House, Shepperton, Middx. Price £2.95.

THIS IS THE third edition of this popular basic reference work containing updated information and photographs of some 300 types. Well illustrated with silhouettes and photographs, each subject is described and the main technical details and dimensions quoted. Colour photographs of some 11 representative types are also included in addition to the many fine black and white photographs of these military aircraft of the world.

**Airmen of World War 1**, by Chaz Bowyer. Arms & Armour Press, 2-6 Hampstead High Street, London NW3. Price £4.50.

*AIRMEN OF World War 1, Men of the British and Empire air forces in old photographs* is the full imposing title of this latest book from enthusiast Chaz Bowyer. Don't let the title 'in old photographs' fool you — there are none of the faded and tatty reproductions sometimes presented in this book. It is a fascinating collection revealing some aircraft and equipment detail that is usually hard to find. Some of the photographs are unfortunately familiar but the Appendix 1 'Songs and Verses' certainly were not and while the 'Observers Lament' will never make the Top Ten, it's one of my favourites.

**Monogram Close-up 3 — Junkers Ju 290**, by T. H. Hitchcock. Monogram Aviation Publications, 625 Edgebrook Drive, Boylston, Mass 01505, USA. Price \$3.95.

A BRIEF history of the variants of the Ju 290, well illustrated with detail photographs and line drawings, this 'Close-up' fills another gap in Luftwaffe aircraft histories. Printed on good quality paper, the majority of the photographs are clear and sharp, the centre spread depicting a Ju 290 A-7 in typical camouflage.

**Wings Over Kabul — The First Airlift**, by Anne Baker and Air Chief Marshal Sir Ronald Ivelaw-Chapman. William Kimber & Co Ltd, Goldolphin House, 22a Queen Anne's Gate, London SW1H 9AE. Price £5.25.

THE STORY of the evacuation of British and Foreign personnel from the Embassies and business areas of Kabul between December 23 1928 and February 25 1929 must be only vaguely known by the majority of aviation enthusiasts. This book sets the record straight but grossly understates the heroism and dangers of the whole affair. The bare facts of flying in the open cockpits of the Victorias, the sole Hinaidi, the DH 9As, Bristol Fighters and the Westland Wapitis at temperatures below minus

Fahrenheit, over or between some of the most dangerous mountain peaks in the world only hint at the kind of pilots who performed this dangerous evacuation. Sir Francis Humphrys, of the British Legation in Kabul, around whom the story hinges, was of a calibre all too rare today.

**B-52 Stratofortress in Action**, by Lou Drendel. Squadron/Signal Publications. Price \$3.95

THEY DON'T come much bigger than the B-52 which first flew as the XB 52 in April 1952. This book describes, but more particularly illustrates, the development of this long range bomber up to the 'H' variant and it is expected that it will still be operational in the 1980s — say 30 years of operational use.

## Military

**Naval, Marine and Air Force Uniforms of World War II**, by Andrew Mollo. Blandford Press, Link House, West Street, Poole, Dorset. Price £2.75.

TO THE USUAL now familiar Blandford pattern, this latest, a companion volume to *Army Uniforms of World War II*, forms a useful basic reference for naval and aircraft modellers. Covering all the main combatant nations of World War 2, there are some 231 illustrated in the colour plates with additionally, examples of swords and daggers, seamen's collars and hat ribbons. The rest of the book is devoted to description of the various uniforms, badges, rank distinction, etc.

**Tanks and Other Armoured Fighting Vehicles 1942-45**, by B. T. White. Blandford Press, Link House, West Street, Poole, Dorset. 171 pages. Price £2.75.

AGAIN A companion volume to those previously published in this series, this one describes and illustrates some 80 tanks and armoured cars, etc, of the 1942-45 period. One of the most annoying points of this book is the haphazard captions to the illustrations which a little more trouble with the layout would have avoided. The potted historical and technical descriptions of the variants illustrated is followed by an appendix of notes on camouflage and markings and a table of comparative data.

**Heavy Artillery**, by Peter Chamberlain and Terry Gander; and **Self-propelled anti-tank and anti-aircraft guns**, by Peter Chamberlain and John Milsom. Macdonald and Jane's, Paulton House, 8 Shepherdess Walk, London N1. Price £1.20 (paperback).

THESE TWO NEW 'Fact Files' compare well with the previous issues in this series with a truly excellent photographic coverage and wide ranging text on all major and minor belligerents of World War 2 and their many fascinating ways of dealing with the same basic problems.

In the light of this highly commendable and much needed research it is unfortunate that several important items of data are missing and that the presentation varies annoyingly from one work to the other. In *Heavy Artillery* neither the rates of fire, time into action or gun detachments are given. In the first two cases this is available for, at most, three weapons and the crews are cited not at all. *Self-propelled* does give the detachment or crew and the rate of fire for AA but not A/T weapons. 'Time into action' is not given, this is largely academic and of short order presumably, but the rates of fire are given in the text and not in the data tables where it belongs. Neither book contains an index or provides a glossary of terms, blithely assuming a knowledge of military designations and abbreviations in more than one language available only to someone with a long standing interest or intensive study of the subject; not a description one would assume of someone who would need to buy a 'Fact File' in the first place to improve their grasp of the subject.

These factors hamper anyone trying to identify the dazzling array of artillery present in World War 2 photographs or descriptions of battles and seriously impede the modeller or wargamer who then has to go to other reference books to find this essential information.

All one can say is 'keep up the good work', but please consider these essential details in any further ventures.

## Miscellaneous

**Motorcycles to 1945**, edited by Bart H. Vanderveen. Olyslager Auto Library, published by Frederick Warne & Co Ltd, 40 Bedford Square, London. Price £2.95.

THIS IS THE 23rd in the Auto Library Series and follows the usual format of good illustrations with comprehensive captions detailing the various subjects. A varied cross section of the many types of motor cycles produced in the world in the period covered results in a nicely balanced book. As an ex-motorcyclist, this reviewer is saddened that so many of the world beating British manufacturers are no longer with us, but what a nostalgic book to browse through!

## Kookaburra books

ALL AVIATION enthusiasts and modellers will be pleased to learn that the famous range of Kookaburra aircraft books are now being distributed at realistic prices in Britain by Patrick Stephens Ltd, Bar Hill, Cambridge CB3 8EL. The titles include Merrick's definitive volume *Luftwaffe Camouflage and Markings Vol 1*, a superb full-colour volume which covers the development of German aircraft markings from 1935 until the Battle of Britain. Volume 2 is also under preparation. Apart from this 'star item' at £7.95 the list includes a wide selection of small paperback 'Profile'-style monographs, the majority illustrated with full-colour photographs or aircraft side elevation drawings, at 95p each. These include volumes on the Fw 190, Hurricane, P-38 Lightning, Me 262, P-40 Kittyhawk, P-47 Thunderbolt and others. A full list of these and other Kookaburra titles will appear in our next issue.



# LETTERS TO THE EDITOR

## He-111s and Canberras

MANY THANKS to Bert Hatton for his excellent drawings which accompanied my article on the Heinkel He-111 H-8, which appeared in the August issue.

I take full responsibility for the fact that in trying to adequately illustrate the colour schemes used, I did not include details of the exhaust pipes in the original drawings. In including these details in his drawings Bert followed the *Scale Models* plans, and drew in the long exhaust pipes. There is a brief reference to it in the text, but all three examples quoted should have the short exhaust stubs.

Although some months have passed since Bryan Philpott's first article on the Canberra was published, additional information has appeared which I hope will be of interest. I have had a soft spot for the Canberra since I spent 12 months as a member of 231 OCU at Bassingbourn, in the early 'fifties.

WD955, mentioned in the article was not one of 'ours', though we did have two or three examples on the squadron in the early grey/black scheme. A fallible memory, and lack of notes taken at the time, suggest WD966, WD981 and WD99? Because they were a complete batch it is easier to remember WE113 to 122, all in the later grey/green/blue scheme, with again odd examples in the WG, WH and WJ ranges being received in an overall silver scheme with large serials on the fuselage sides in the last two or three months before I left. All the above were B2s. Despite being the OCU, we had no trainers up until the time I left.

Incidentally, WD955 was in the static park at this year's Battle of Britain show at Farnborough in September, with the latest ECM Moth marking and with all radomes overpainted with either green or light grey as appropriate.

I wrote to Bryan to congratulate him on the article, and in his reply he commented that further information had come to light,

unfortunately too late to be included in the text of the article.

In the section on the T4, the second paragraph states that the B2s that were converted flew with only a single clear vision panel on the (usual) port side. The later information was that all airframes not built 'from the ground up' were retrospectively modified to have canopies with two panels fitted, so that externally only the serial would 'give the game away' as to the airframe's origin.

Within the last month more information has arrived which throws further light on the subject, and leads one to conclude that the 'retrospective mods' were more extensive than had been believed, amounting in fact to a complete change of nose section.

WD954 (what remarkable longevity these WD Canberras have) was converted from a B2 to a T4 by the above process, and eventually found its way to Edinburgh, Australia, after surviving Pacific and Australian bomb tests. In December 1974 it was towed on its own wheels 240 miles to be part of the Mildura Aircraft Museum, after submitting to serious but non-fatal surgery. In the near future she will be restored to her former glory.

By some fluke which is nothing short of a miracle the original nose of '954 was delivered to Manby as a training aid, where it was used until April 1972. Being no longer required it was gratefully received by the Lincolnshire Aviation Society and is now displayed at their museum at Tattershall, Lincs.

Coming now right up to date with the November issue may I thank Mr Carter of Keighley for his interesting details of the Heinkel crash, and query the cover photo. Surely this 'G' is an 'R'. But thanks for a great mag anyway.

John Burgess, Eastwood, Notts.

## Events and clubs

THE TUNBRIDGE Wells Wargames Society are having an **Open Day** on Saturday,

March 13, at King Charles' Hall, Warwick Park, Tunbridge Wells, Kent. The meeting will be open to the general public from 11 am to 5 pm, but exhibitors, etc., will be allowed in from 9.15 am.

The meeting will include an open wargames championship, a chance for beginners to take part in a specially organised game, a demonstration of full-size ancient combat by members of the Norse Film and Pageant Society, and open AFV and uniform recognition competitions, as well as a bring-and-buy stall and wargames model painting competitions. Entry for members of wargames and military modelling clubs is free, for others 20p.

For any further information, contact George Gush, 154d Upper Grosvenor Road, Tunbridge Wells, Kent.

FOLLOWING THE success of their 'Waterloo Day' in London last summer, Arms & Armour Press are holding another public exhibition on March 27 at the London Tara Hotel, Wrights Lane, Kensington, to celebrate publication of their *Atlas of the American Revolution*.

Called **America's Military Heritage 1776-1865**, the event will feature lectures on American military costume, weapons and firepower during this period, plus others on Burgoyne and Stonewall Jackson; a wargame staged by Don Featherstone and Pete Gilder; American Archive film on the War of Independence and Civil War; and trade and society stands.

Admission is 50p to the wargame, trade and society stands only, or £1.50 for a 'full ticket' to all the lectures and films as well. The latter are being sold in advance and readers are advised to book as soon as possible to avoid disappointment. Full tickets are available from Arms & Armour Press, 2-6 Hampstead High Street, London NW3.

THE 5TH Sywell Radio Control Model Hobby Exhibition will take place at Sywell Airport, Northampton, on Easter Sunday and Monday, April 18 and 19. The event opens at 9.30 am and demonstrations of model radio control flying will take place continuously between 10.30 am and 3 pm, and 4.15 to 6 pm, while the full size aircraft display will run from 3.15 to 4.15 pm. Trade stands will be present, while visitors will have the opportunity of pleasure flights in local aircraft.

## WARGAME × 60 = T

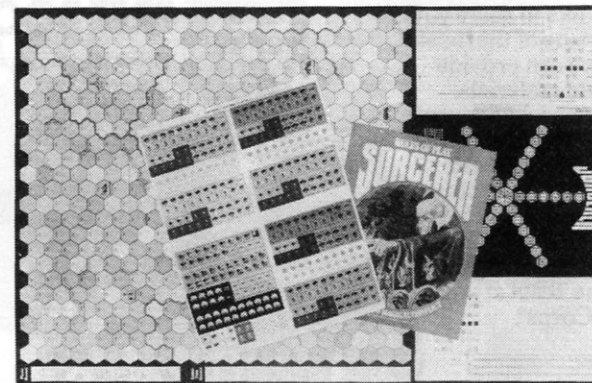
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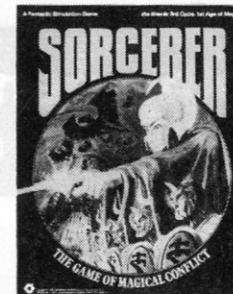
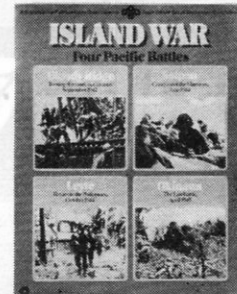
*Sorcerer* is a multi-scenario game with solitaire and multi-player versions (as many as six Sorcerer-Players).



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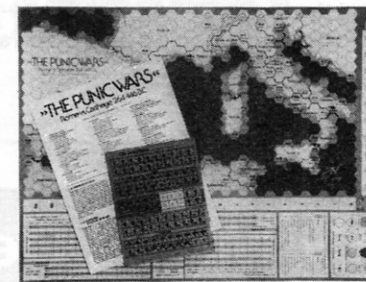
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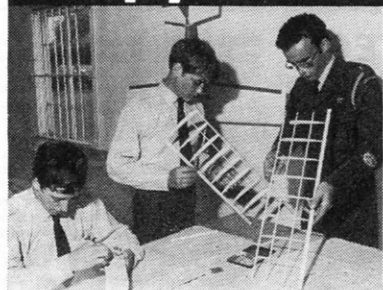
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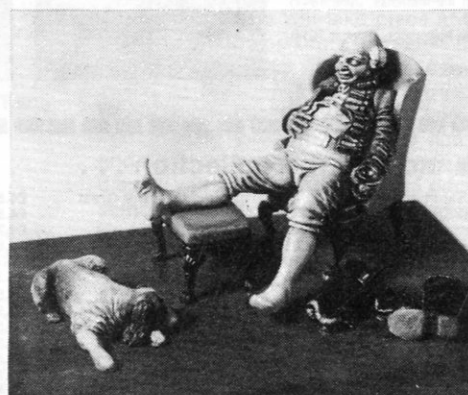


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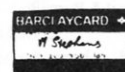
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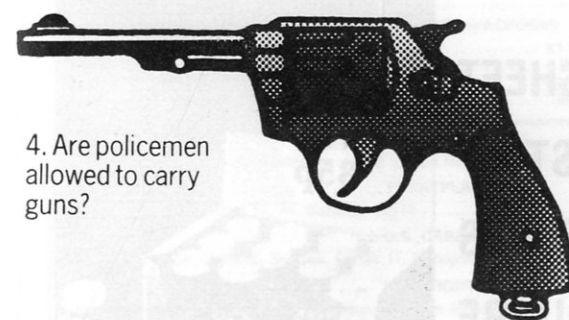
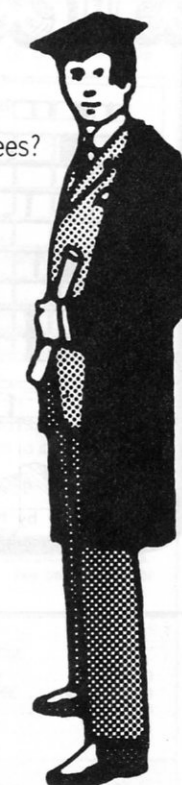
# No. 9 What do you know about the police?



1. Do all policemen have to start as police constables?

3. Do any policemen have university degrees?

2. What is the rank of the policeman wearing this on his shoulder?



4. Are policemen allowed to carry guns?



5. What is a Panda car?

This is the ninth in a series depicting the background, present-day work and development of Britain's police force. Watch out for the next in the series, which will appear shortly in this publication. For further information about the police write to Police Quiz, ( BJ 26 ) Home Office, London SW1A 2AP.

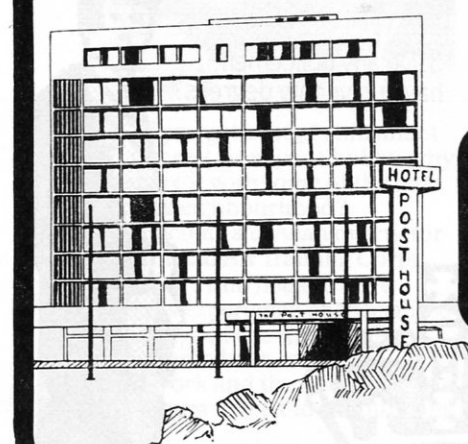
1. Yes.  
2. Superintendent.  
3. Yes. At the end of 1974 there were 573 serving police officers with degrees in England and Wales.  
4. No, unless they are dealing with a patrol duties, so called because of its contrasting colour.  
5. A police car used for normal protection duties.  
6. Criminal known to be armed and dangerous, and sometimes on

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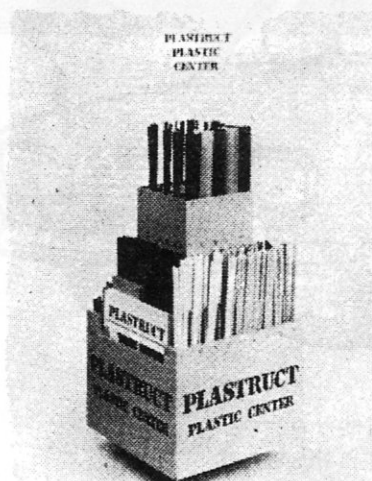
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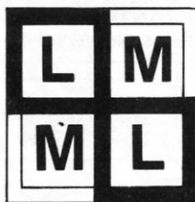
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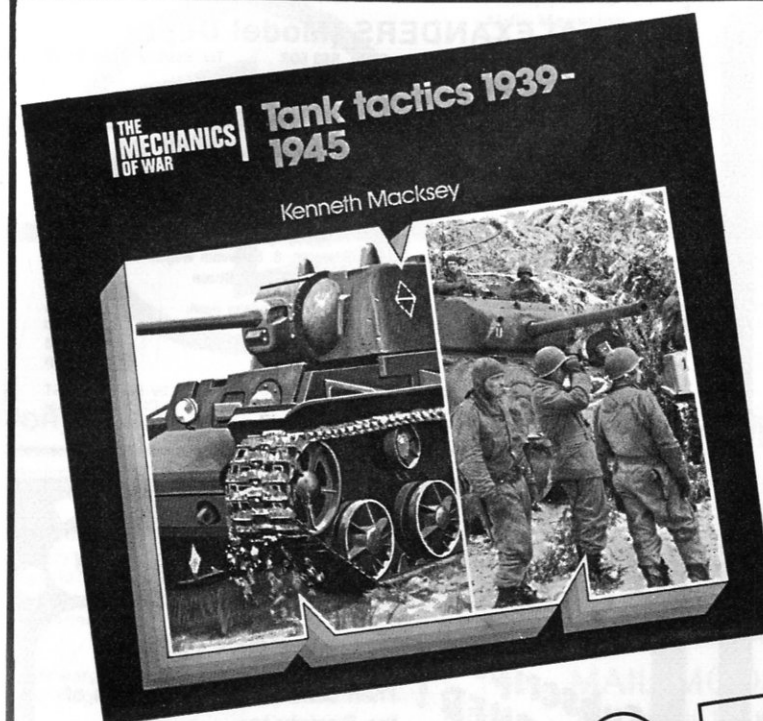
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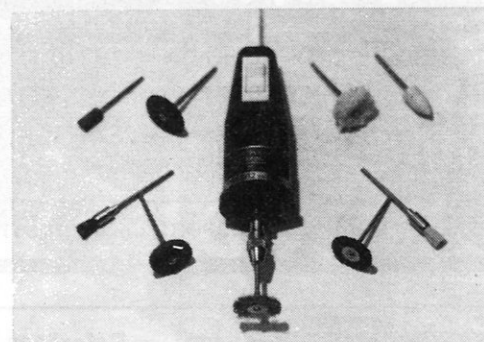
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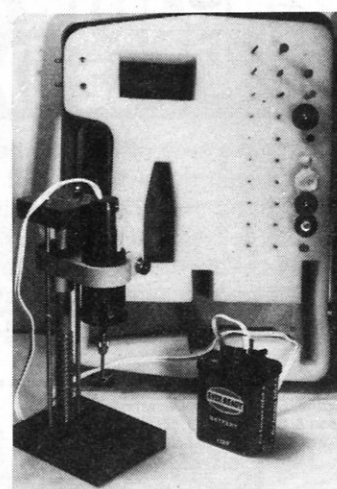
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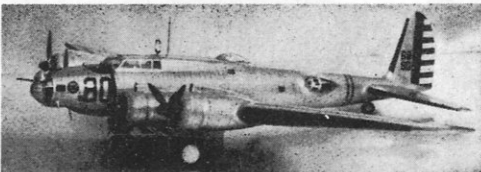


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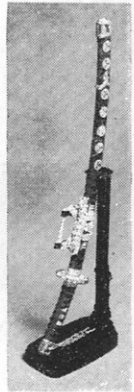
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